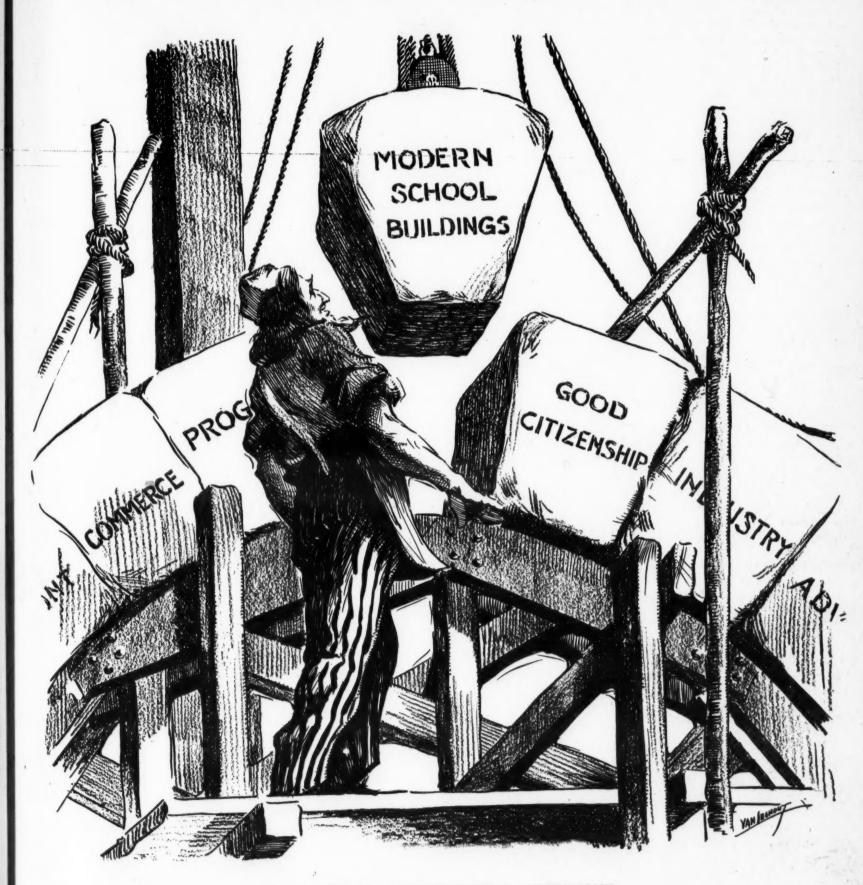
School Board Journal

This Journal was founded 1890 by WILLIAM GEORGE BRUCE

Vol. XXXIV, No. 6

MILWAUKEE - New York - Chicago, JUNE, 1907

\$1.00 PER YEAR



UNCLE SAM'S ARCHITECTURAL KEYSTONE.

The progress of the American school system owes much to the modern school architecture as an element in promoting the cause of popular education.

e in this

ester. Ind.
Indianapolis
Co...

apolis, Ind.

pids, Mich.
Chicage
Chicage
Chicage
Chicage

...Chicage
c...Chicage
ago H'ts,Ill
c...Chicage
bourn, Wis.
agfield, Mo.
AIES.
Ston, Mass.
.Y. & Ch'ge
te Co..N. Y.

te Co.N. Y.

N. Y.

Cuse, N. Y.

Co. Phila

andusky, O.

ndianapolis

y Co...

apolis, Ind.

pids, Mich

chicage

Chicage

Y., Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Ago H'ts, ill.
bourn, Wis.
ngfield, Mo.
98AL.

Chicago
Chicago
Milwaukee
bourn, Wis

Milwaukee

MCIES.
gency...
mington, Vt.
ago, Boston
Boston
agy...Boston
my...
New York
noy...
Tracuse, N. T.
Agcy. N. T.
isburg, Pa.

isburg, Pa au, Dept. D satown, Pa sency. Ch'go cy. Chicago Agcy. ... Chicago Agency. ... Chicago Agency. ... Chicago Minneapolis maburg, Mo 7... Denvers' Agcy. ... Nover, Colo.

S.Chicago.
TXTURES.
)Chicago

YORK.

RECENT DECISIONS.

Text Book Adoptions.

Under the law, conferring the power to adopt and purchase text-books on the board of directors, and providing that it shall be the duty of the board of directors to advertise for bids for text-books and award the contract for them to any responsible bidder offering suitable textbooks at the lowest prices, where a board selected text-books, and awarded the contract without such advertisement, its action was illegal, not only as to the award of the contract. but also as to the selection of the text-books. -McNees vs. School Tp. of East River, County of Page, Iowa.

The Purchase of Supplies.

The law of 1860, declaring that no member of any corporation or public institution, or any officer or agent thereof, shall be interested in any contract for the sale or furnishing of supplies, or materials to be furnished to, or in the use of, any corporation or public institution of which he shall be a member or officer, etc., as applied to school directors, is not restricted to cases where the director of a purchasing school district is at the time a member, officer, or agent of some other corporation which has contracted to furnish the supplies or materials, but includes a case where the contract is between a person in his sole right, or as a member of a firm, officer or agent of a corporation, and the school district of which he is a directer.—Commonwealth v. Miller, Pa.

The law of 1860, declares that no member of any public institution, or any officer or agent thereof, shall be interested in any contract for supplies or materials to be furnished to any public institution of which he shall be a member, officer, etc. Held, that a corrupt or dishonest intent, or unfairness in the price charged for the supplies and materials, is not an essential element of the offense, so that an allegation in an indictment that the defendant was "corruptly" interested in the contract is surplusage.—Commonwealth v. Miller, Pa.

School Tax Levy.

Boards of education have authority to levy taxes only for educational and building purposes.—St. Louis A. & T. H. R. Co. v. People, III.

A levy by a school district for building purposes is illegal unless the building has first been authorized by a vote of the people.-St. Louis A. & T. H. R. Co. v. People, Ill.

Where a board of education had been authorized to build a new school building and issue bonds of the school district to pay therefor, and to levy an additional tax for building purposes to supplement the bonds, it had authority to levy a tax for a heating plant to be installed in such building.-St. Louis A. & T. H. R. Co. v. People, Ill.

School Districts.

The General Laws of 1896, chapter 62, sections 8-10, provide for the assessment by town assessors of a tax upon the ratable property located within the limits of a school district in the town to pay any judgment recovered against the district. Laws of 1903 abolished all school districts after January 1, 1904, and vested the title to all the school property of each district in the town in which such district was located, and, on the abolition of any school district its corporate liabilities continue for the enforcement of its rights and duties.

School Soard Immal

Held, that the indebtedness of an abolished school district cannot be enforced against the school property formerly in such district, the only method being that provided by sections 8-10,-In re Abolishing School District, R. I.

School Officers.

The appointment of the district clerk by directors of a school district should be made at a regular or special meeting of the board .-State ex rel. Morehead v. Cartwright, Iowa.

Where the clerk of a school district was not appointed at a regular or special meeting of the board, as he should have been, but for a period of years the board recognized him as the clerk and adopted and profited by his official acts, he was an officer de facto, so that the enumeration taken and filed by him under the revised statutes of 1899, requiring an enumeration of children of school age, must be regarded as having been a legal enumeration by the board.-State ex rel. Morehead v. Cartwright, Mo.

Under Public Laws of 1902, providing that the school committee of each town shall elect a superintendent of schools thereof at the first regular meeting of the committee succeeding the annual election thereof, and General Laws of 1896, declaring that the word "town" shall include a city, the school committee of a city consisting of three members, one elected at the November election of each year for a term beginning in January following, cannot elect a superintendent to serve under the committee as it will be constituted after the election in November, though the committee from the time of the adoption of the charter, requiring an annual election of a superintendent, had elected a superintendent at any time during the year at its discretion.—In re School Committee of Pawtucket, R. I.

Discharge of Employes.

Chicago, Ill. Employes of the board of education may be tried and discharged by the board of education without appeal to the civil service commission, by the decision in the case of Owen B. Vaughn against the City of Chicago, the board of education and the civil service commission.

Vaughn was employed by the board as a carpenter under the civil service laws. He was dismissed by the board and brought suit on the ground that he could be discharged only by the civil service commission. The court held that the relations of the employes of the board of education to the board are governed by both the civil service law, and the pension law, and that the two laws must be construed together. The court said: "The board of education has the power to investigate and determine charges against its employes and to remove or discharge them, but in all other respects the civil service act applies to such employes, according to its

School Sites.

Iowa. The Supreme court has rendered a decision which will have an important bearing on the powers of county superintendents and the state superintendent in deciding appeals over the actions of school boards. The court held that a county superintendent cannot change the location of a school site, but is simply empowered to affirm or veto the selection of the local school hoard.

Under the law authorizing the special school district of Little Rock to borrow money and mortgage the real property of the district therefor empowers the district to mortgage all or part of the real property of the district as the school board may deem advisable.—Schmutz v. Special School Dist. of Little Rock, Ark. 1906.

Georgia. Attorney General John C. Hart has rendered an opinion that a county board



HON. PAYSON SMITH.

Auburn, Me. Recently appointed Superintendent of Public Instruction to succeed Supt. W. W. Stetson

or education cannot be dismissed for neglect The board of of duty without a hearing. Columbia county failed to redistrict the county 59 provided by a new law, whereupon the grand jury of the county discontinued the board and appointed a new body. The attorney general holds that it is a violation of the constitution to dismiss any public official without giving him a hearing.

Lebanon, Pa. The school board has adopted a new rule for determining the standing of pupils. It reads:

"In determining the pupil's mark on any subject, the class work and reviews shall constitute four (4) factors, and the final examinations one (1) factor. Subjects requiring no preparation outside of the recitation shall be considered at one-half the value of those requiring preparation. Those subjects extending over part of the year shall receive a pro rata value, and those in which there is no final examination shall receive four-fifths value. Pupils having a class average of 85 or above may be exempt from the final examination."

Tennessee. The state legislature has enacted two laws for the betterment of the schools. The first requires the state superintendent of public instruction to prepare a pamphlet of plans and specifications for rural schools costing \$500 to \$5,000. Several other southern states have adopted this means of improving the architecture of the country schools.

The second law provides for a uniform system of accounting for the school funds. A set of books will be devised to make the keeping of the records simple and complete and easy



Lucky for Her.

First Teacher-What vexed me most was that in the article in the newspaper they alluded to me as "Miss X."

Second Teacher-H'm, yes; X is an unknown quantity, isn't it?

Hea

With the of one room are usually eted stovefour rooms the heating plished by methods of differ mate It will be cial referen one story in

There are use, for th buildings of 1. Indir

tural draft system. 2. A co heating, w 3. Indi

forced dra plenum sys 4. The rect heatir The ind

vantage of has the di the differe indoor and The fan any requir during an quires ski

disadvanta

tilation as

fan, and t lation also The use with the without th able value ture of th not be or necessary. taining th when the pecially in

er or whe siderable System In add

of ventil named, th by reason features, tensively considere subject. of a wa might no shortcom exhaust 1 extracted a fan, this met that by the occu

> *Read Superint Educatio

Lansing,

Heating and Ventilation of School Buildings

By THOMAS S. AINGE, Sanitary Engineer, Michigan Department of Health

With the exception of rural school buildings of one room, in which heating and ventilation are usually accomplished by means of a jacketed stove—and of buildings of from two to four rooms and one story in height,—in which the heating and ventilation are usually accomplished by means of hot air furnaces — the methods of heating and ventilation need not differ materially in large or small buildings. It will be understood, that this paper has special reference to school buildings of more than one story in height containing upwards of four rooms.

The Choice of a System.

There are four principal methods, in general use, for the heating and ventilation of school buildings of the class under consideration:

1. Indirect heating, with ventilation by natural draft, commonly known as the gravity system.

nstruction

r neglect

board of

ie county

he grand

y general

nstitution

at giving

nas adop-

standing

on any

hall con-

examina-

niring no

shall be

those re-

extend-

ve a pro

re is no

our-fifths

ge of 85

final ex-

ools. The

of public

plans and

g \$500 to

tes have

he archi-

form sys-

ls. A set

e keeping

and easy

t was that

unknown

2. A combination of direct and indirect heating, with natural ventilation.

3. Indirect heating, with ventilation by forced draft, sometimes designated the fan or plenum system.

4. The fan system in combination with direct heating.

The indirect method of heating has the advantage of being largely self-operating, but it has the disadvantage of being unreliable when the difference between the temperature of the indoor and outdoor is not great.

The fan system is positive, and will furnish any required change of air in a building and during any condition of the weather, but requires skilled help to operate it, and has this disadvantage,—that where the heating and ventilation are dependent, as is usual, upon the fan, and the fan stops, the heating and ventilation also exceed

The use of direct radiation, in combination with the ordinary indirect heating, with or without the use of the fan, will be of considerable value in maintaining the proper temperature of the rooms at such times as they may not be occupied and ventilation may not be necessary. It may also be of value in maintaining the required temperature of the rooms

when they are occupied, especially in the very cold weather or where the rooms have considerable exposure.

Systems to Be Avoided.

In addition to the methods of ventilation which I have named, there is a method which, by reason of its objectionable features, has never been extensively used, and is not often considered in dealing with this subject, save for the purpose of a warning to those who might not be familiar with its shortcomings. I refer to the exhaust method, in which air is extracted from the building by a fan, usually placed in the attic. The chief objection to this method lies in the fact that by exhausting air from the occupied rooms, air from

*Read at meeting of School Superintendents and Boards of Education of Michigan, held at Lansing, May 3, 1907. undesirable sources, as basements and toilet rooms, may be drawn into the rooms. Furthermore, if the construction of the building is not good, air from outdoors is drawn into the rooms, through crevices and other openings, in many instances in such manner and quantity as to cause unpleasant drafts.

The "Direct-Indirect" Method.

There is still another method of heating and ventilating which has been termed the "direct-indirect" method, which, by reason of its cheapness and simplicity, has maintained a certain degree of popularity. Its use has necessarily been confined to the heating of small rooms. An ordinary steam or hot water radiator or coil, placed on an outside wall—usually under a window—and partly or wholly encased by a sheet metal jacket, and an air duct extending from outside the building to a point beneath the radiator, constitute the apparatus.

Under the most favorable conditions this method will not give entire satisfaction, because, where any considerable amount of fresh air is required for ventilation, the air must enter the room faster than it can be properly warmed, and will cause discomfort. Further, when the wind is blowing hard against a wall on which a direct-indirect radiator is placed, the air supply would probably have to be cut off temporarily to avoid unpleasant drafts. Under similar conditions, where the radiators are on the leeward side of the building, air would probably be blown out of the room through the air ducts intended for inlets.

Objections to Furnace Heating.

Furnace heating is not considered advisable for schools of more than four rooms, and even in a small building will not give as good results as indirect heating by steam with natural or forced ventilation.

Of the many objections which have been raised against the use of furnaces in school buildings, three are considered of paramount importance:

1. The ever present possibility of contamination of the air supply by poisonous furnace gases.

- 2. The danger from overheating of the radiating surfaces of the furnace by which the air passing over them would be rendered unsuitable for respiration.
- 3. The difficulty of properly heating certain rooms during the prevalence of high winds.

For all ordinary sized rooms, in which the air space in the rooms and the sizes of the ventilating flues are properly proportioned to the number of persons who occupy the rooms, the natural method of ventilation will give fairly good results, and a building containing a large number of ordinary sized rooms may be ventilated by this method with the same degree of success as a building of but one or two rooms. But for rooms occupied by many persons, and for any room where positive ventilation is desired at any and all times, the fan system should be chosen.

The Requirements for Good Ventilation.

In an occupied room, an approximation of the purity of normal outdoor air cannot be secured, nor maintained for any considerable length of time. A standard of permissible impurity, therefore, has been adopted as the unit of ventilation.

In very pure air, the amount of carbon dioxide present is slightly more than three parts in ten thousand, and in the outdoor air of certain localities, it may be as high as five parts per ten thousand. If a quantity of this normal air is, so to speak, bottled up within an occupied room, there is an immediate and sensible increase in the amount of carbon dioxide and of other impurities, the quantity depending upon the number of occupants and of the amount of fresh air which finds its way into the room. If fresh air is constantly passing into and through a room without causing inconvenience to any person, and in quantity sufficient to dilute the products of respiration, so that the amount of carbon dioxide in the air of the room does not at any time exceed that present in the air outdoors by more than three parts in ten thousand, the ventilation is said to be good. Air containing ten parts of carbon dioxide per ten thous-



THE NEW HIGH SCHOOL, DAVENPORT, IOWA. F. C. Clausen and P. T. Burrows, Architects.

School Sound Tournal

and is considered poor, and by some authorities distinctly harmful; twenty parts is very poor; and forty parts extremely poor. And yet these amounts are often equaled if not exceeded in some school buildings. An instance is on record of over seventy-two parts of carbon dioxide in each ten thousand parts of the air of an overcrowded schoolroom occupied by seventy girls.

The determination of the amount of carbon dioxide in the air of a schoolroom is a somewhat difficult process, and presupposes a knowledge of analytical chemistry. A simple analysis will not usually be sufficient to form the basis of an opinion as to the sufficiency, or otherwise, of the ventilation. But, as the carbon dioxide is used merely as the index of the more important organic matter of respiration, and as the organic matter may be detected by the sense of smell at such times as the air in a confined space is considered impure, the sense of smell, carefully employed, may give a very

good idea of the amount of impurity. In a well ventilated room, to a person entering directly from the outer air, there should be no trace of odor of any kind, or difference in point of freshness, distinguished between the air of the room and of that outdoors. Such a condition of purity will be a safe indication that the carbon dioxide does not exceed seven parts in ten thousand of air. Where the carbon dioxide in a confined space is equal to eight or nine parts in ten thousand of air, the odor of organic matter will be perceptible to the average person. With from ten to twelve parts, the atmosphere will be close and disagreeable; and with thirteen to fourteen parts, the air will be very close and oppressive. Beyond this point the sense of smell will cease to detect any increase in the amount of organic impurity.

Amount of Fresh Air Necessary.

For the maintenance of a comparatively pure condition of the air of a schoolroom, at least thirty cubic feet of fresh air per minute for each pupil should enter the room.

Air and Floor Space.

The generally accepted minimum amount of air space for each pupil in a schoolroom is two hundred cubic feet, and the minimum amount of floor space is fifteen feet.

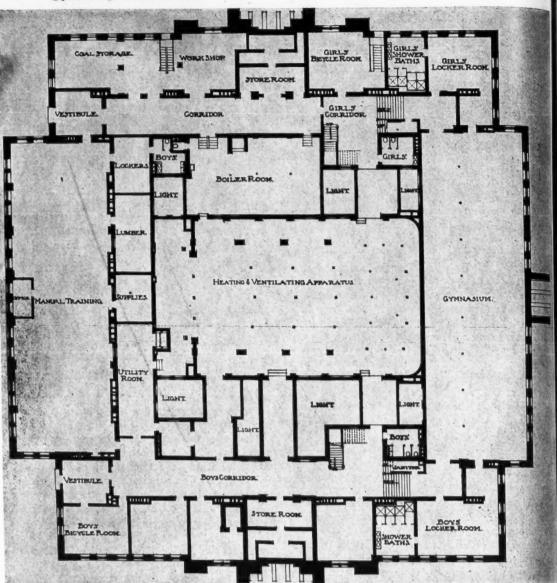
Change of Air.

Where a schoolroom is of the proper size to afford each pupil the amounts of floor and air space just mentioned, the air of the room will require to be changed about every seven minutes. If, however, the number of pupils in such a room should, at any time, be increased beyond the number which should properly occupy the room, a more frequent change of air is necessary, unless the ventilating apparatus is equal to the demand, which is seldom the case, this increased change cannot be accomplished without the aid of a fan to force the air through the room, to the probable discomfort of the pupils.

Source of Air Supply.

The air supply, should in every case, be from outdoors, direct and never from basement rooms unless they are especially prepared and set apart for this purpose. Neither should the vitiated air of the rooms, as in some schools, be conducted downward to the basement and re-warmed and discharged back into the room.

The location of the fresh-air openings should be made with due regard to their isolation from possible source of contamination. They should never be placed on a level with the ground outside, particularly if adjacent to a street or alley, because they may then become receptacles for dust, possibly contaminated. Neither should they be located in the sidewalk cr a public thoroughfare because they will be-



PHYSICA

DOMESTIC SCIENCE.

DOMESTIC SCIENCE.

LIGHT

CORRIDOR

THE CORRIDOR

CORRIDOR

THE CORRIDOR

CORRIDOR

CORRIDOR

CORRIDOR

THE CORRIDOR

THE CORRIDOR

THE CORRIDOR

CORRIDOR

CORRIDOR

THE CORRIDOR

CORRIDOR

THE CORRIDOR

THE CORRIDOR

THE CORRIDOR

CORRIDOR

CORRIDOR

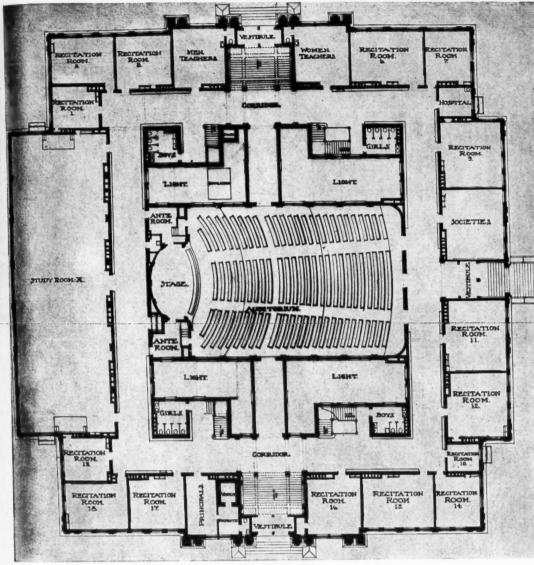
THE CORRIDOR

THE CORRIDOR

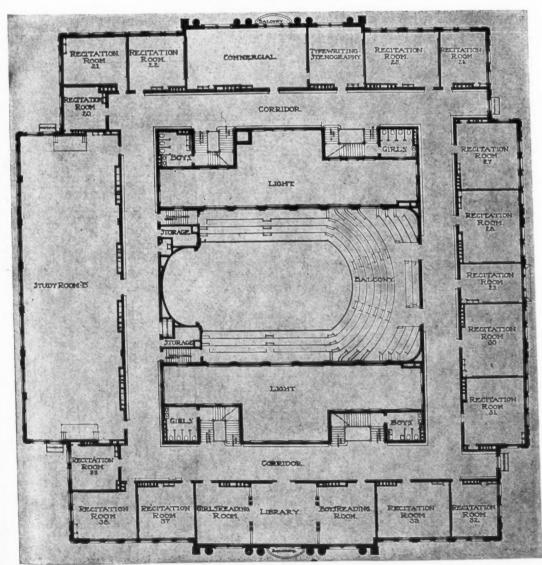
CO

THIRD FLOOR PLAN, DAVENPORT HIGH SCHOOL.

School Board Townal



FIRST FLOOR PLAN



SECOND FLOOR PLAN, DAVENPORT HIGH SCHOOL.

come receptacles, not only for dust but also for sputa of passersby, some of whom might be suffering from pulmonary diseases.

Fresh Air Rooms.

The most convenient arrangement of the fresh-air supply would be the construction of one or more rooms in the basement, immediately under the vertical warm-air flues, for the reception of the radiators or heating stacks, for warming the fresh air. These rooms should, if possible, be adjacent to outside walls so that they may be well lighted. The openings to the outer air, which will usually be the windows, should have double screens, i. e., a fine copper screen to keep out flies and other insects, and a strong outer screen to prevent the inner screen from being broken by the pupils. The walls, ceilings and floors of these rooms should be smooth and impervious to air and moisture. They should have tight fitting doors, and the doors should be kept locked so that no one may have access to them but the person in charge of the heating apparatus.

Common sense would dictate that these rooms should be kept in a clean condition. Nevertheless, it is not uncommon to find them in a very dirty condition, with rough and uneven floors and walls, and ceilings not plastered are sometimes selected as the most suitable or convenient places in which to store the junk of the building, and, were it not for the heating stacks, they would never be recognized as the

fresh-air rooms.

Where the bases of warm air flues are not within a convenient distance from an outside wall, or if for any reason a fresh-air room is impracticable, the heating stacks should be properly enclosed by means of galvanized sheet iron boxes, and the fresh air conducted to these enclosures in air-tight metallic tubes or ducts. Wooden ducts or enclosures should not be used for these purposes, because they shrink or crack, and thus allow air from undesirable sources to enter and contaminate the air supply.

Sizes and Arrangements of the Ventilating Flues and Registers.

The ventilating flues should never be on outside walls, because the air in them would be cooled down, in some cases to the point of stopping, or even reversing, the air currents.

Registers for the supply of fresh air and the removal of vitiated air should, as a rule, both be on the same side of the room, and located as nearly as possible opposite to the most exposed wall of the room, or to the side having the largest amount of glass surface.

The registers for the supply of fresh air should be in the walls, about six or seven feet above the floors. They should never be in the floors, because they thus become receptacles for

dust, and possibly sputa.

The vent registers should be in the walls, at the floor levels. They are sometimes placed in outside walls for the purpose of preventing air which has been cooled by contact with the walls or windows from spreading across the floors. Such a location of the vent registers is objectionable, because it allows the fresh air to pass out of the room before it has made the circuit of the room, and leaves a comparatively dead air space in that part of the room nearest to the fresh air opening.

Were it desirable to remove the vitiated air by registers on the coldest sides of the rooms, there would be serious difficulties in the way of its accomplishment. The flues to which the registers were attached could not be carried, vertically, on or in the outside walls, because the air in them would have little or no movement, and there would probably be a down draft in very cold weather. Further, if the joists were to be laid parallel to the walls in which the register were to be placed, it would not be

(Continued on Page 18)

School Sound Tournal

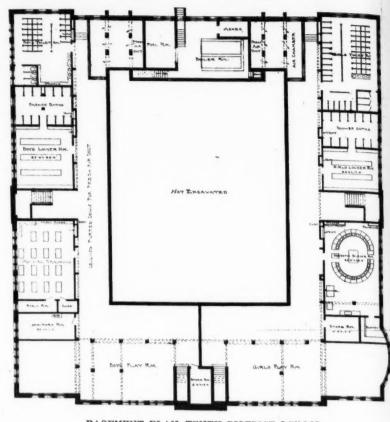
FRONT ELEVATION, TENTH DIST. SCHOOL, MILWAUKEE, WIS.
Leenhouts & Guthrie, Architects.



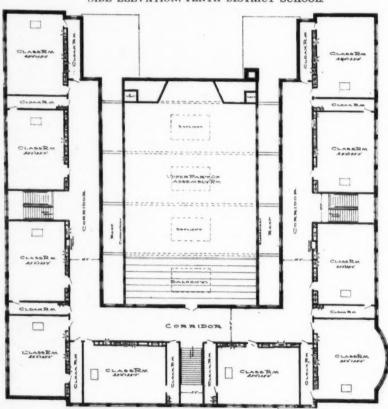
REAR ELEVATION, TENTH DISTRICT SCHOOL.



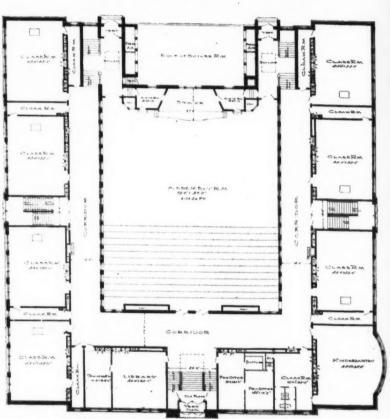
SIDE ELEVATION. TENTH DISTRICT SCHOOL.



BASEMENT PLAN, TENTH DISTRICT SCHOOL

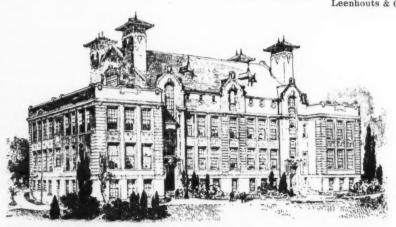


FIRST FLOOR PLAN, TENTH DISTRICT SCHOOL.

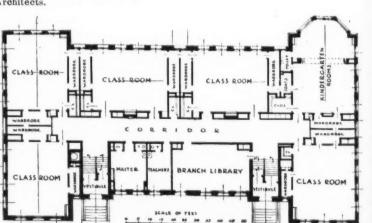


SECOND FLOOR PLAN, TENTH DISTRICT SCHOOL,

PLANS OF THE NEW TENTH DISTRICT SCHOOL, MILWAUKEE, WIS. Leenhouts & Guthrie, Architects.



PERSPECTIVE, NONANTUM SCHOOL.



FIRST FLOOR PLAN, NONANTUM SCHOOL

PERSPECTIVE AND FLOOR PLAN. NEW SCHOOL AT NONANTUM, CITY OF NEWTON, MASS.
Ripley & Russell, Architects,

The I

That the progan of the behealthful and that organ, st of medicine, his no exception use in naturase weakness apt to increase once been proposed with tention, but of the cause areal physical

With this at the eye so me eral discomform cannot persis lassitude, slee be overcome tions of general illness and pal cause for swe general illness and the use unfavorable of the control of the control

Oculists remischief is value lowing the comperfect eye ject does not in so far a making conschool not use the constant of the

Notice
No income
the general
cyes is due
wise defecti
this imports
have been e
sonal notion
agitated be
gatherings,
seemed, bee
dropped, an
to devise co
shading the
judgment.

The only of this sul principles. likes and d notions, an mislead an upon its trartistic ter ful color s ing though

Good wl plenty of health of a great relic burdenedkinds. Cl ful, can o

Classrodinsufficien much des lewed to building to the su of light on indirectible, state area to prings or

The Eye of the Pupil and the Lighting of Schoolrooms

By JAMES A. BACH, M. D.

That the proper exercise and use of any organ of the body under correct conditions is healthful and conducive to the well-being of that organ, stands as an established principle of medicine, hygiene and physiology. The eye is no exception to this general rule. Careful use in natural and artificial light will not cause weakness of sight, nor is the astigmatism apt to increase when the focus of the eye has once been properly adjusted. Disease will spread with irritation, affection and non-attention, but can be overcome by the removal of the cause and the improvement of the general physical health.

With this as an admitted fact, why then is the eye so much cause for complaint and general discomfort among school children? Why cannot persistent headaches, pain in the eyes, lassitude, sleepiness, inattention and dizziness be overcome and avoided? Why are depreciations of general health, stunted growth, weakness and pallor not remedied? What is the cause for swollen eyes, spasms of the lids and general illness resulting from close application and the use of the eyes under probably very unfavorable circumstances?

Oculists readily answer, that most of this mischief is wrought by nervous exhaustion following the excessive use of the mechanically imperfect eye. However, that phase of the subject does not belong to this discussion, except in so far as it bears upon the necessity of making conditions surrounding the child in school not unfavorable.

Notions and a Physiologic Basis.

No inconsiderable portion of the damage to the general health of pupils as well as to their eyes is due to insufficient, improper or otherwise defective lighting of schoolrooms. this important matter many offhand opinions have been expressed, founded mostly upon personal notions. Some years ago this subject was agitated before school boards and teachers' gatherings, and after the matter had, as it seemed, been completely threshed out, it was dropped, and class teachers continued as before to devise color schemes for wall decoration and shading that were indeed devoid of even good

The only proper foundation for a discussion of this subject must be based on physiologic principles. This no one will deny. Individual likes and dislikes, not so based are but empty notions, and must be avoided as tending to mislead and result in chaos. Let us discuss this upon its true basis and not be swayed by some artistic temperaments who intrude their fanciful color schemes into our schools, without giving thought to the physiologic requirements.

Good white sunlight in the schoolroom and plenty of it is a sine qui non to the general health of the children besides being a source of great relief to the eyes that may already be burdened with mechanical defects of various kinds. Close application in reading, so harmful, can only be relieved by good light.

Classrooms are more often supplied with insufficient light than an excess of light. As much desirable light as possible should be allowed to enter. To facilitate this, the school building should have full and free exposure to the sun, so that this most perfect source of light may be fully utilized, either directly. or indirectly. School buildings should, if possible, stand upon elevated ground of sufficient area to prevent shadows from adjoining buildings or trees. The windows should extend as

near to the ceiling as possible with careful avoidance of ornamental projections. The square topped windows may be preferred to the Gothic, which are objectionable.

The Kinds of Light.

Light may reach the eye in three different ways, as follows: (1) Direct light, or that which strikes the eye directly from its source, (2) Reflected light, or that which strikes the eye after it has been thrown back by one or more surfaces sufficiently smooth to reflect a considerable number of rays in the same general direction, (3) Diffused light, or that which reaches the eye after it has been reflected from all possible surfaces round about. In diffused light the air is crowded, as it were, with silent lines of light each running in its own direc-Back and forth they pass in all directions, every surface receiving light, every little grain and fibre acting as a reflector to send it out again. Thoroughly diffused light does not cast shadows, all surfaces participating in the reflection and re-reflection.

The most favorable light to work with, as to quantity and quality, is the diffused white sunlight from a northern sky. The photographer knows the excellent services of diffused skylight. Using this as a basis, we must further consider the direction from which this light is admitted for use, so as to avoid annoying reflections and other disturbing elements. It will be seen that the question of light may be considered under three heads, viz., Quantity, Quality and Direction.

Quantity of Light and Its Regulation.

(1) Quantity: The darkest place occupied by any pupil should be so lighted that diamond type can without special effort be read at a distance of at least twelve to fifteen inches from the eye. By diamond type we understand the smallest type used in printing. The size of this type subtends an angle of five minutes at a distance of twelve inches from the eye and represents the physiologic limitation of vision.

We all readily agree that the quantity of light admitted must be ample. This is not only necessary for sufficient lighting, but is an absolute demand for general development and perfect health of children. Good, white sunlight is an essential for bodily health, and particularly so for the growing child. Not only does it fortify the child against disease, but is directly destructive to the various micro-organisms which so abundantly invite disease to school children living under unfavorable conditions. In relation to the eye, plenty of good light becomes essential, relieving the eyes of strain and consequent damage.

The regulation of the amount of light, especially in those rooms of a school which are exposed to the direct rays of the sun, is of great importance. Blinds and curtains are used for this purpose. The essential qualities which these light regulators should possess are as follows: (1) They should intercept the direct rays of the sun. (2) They should not dazzle. (3) They should transmit a maximum amount of white light. It is indeed difficult to find material which perfectly meets all these requirements. This can be approximated by such material as will not interfere with the quality nor too much with the quantity of

Shades and Wall Coloring.

Gray colored shades with slight modifications may be used. If the light in any room is not

abundant, white or the lightest grays are Shades should roll at the bottom of proper. the window. This will allow the more advantageous light to enter, besides making it easier to lower the upper window for other

Gray is generally recognized as the best color for any classroom. Tints other than gray and some slight modifications should not be employed. The ceilings of all rooms should be white. Thus is gained a valuable reflector and diffuser of light. The surface must not be glistened, but slightly roughened. Glass aulled on one side by sand blowing makes a desirable substance for shading, but being too costly, is hardly practicable. Blackboards, though not disturbing the quality of light, absorb a considerable portion of it. Care must be taken that in small rooms only a limited amount of wall space be given to blackboards. White should be the predominant color in such

No artificial light can ever equal diffused sunlight. It is therefore desirable that children should be required to do their studying if possible during the daytime. However, when necessary, artificial light should be made to correspond as nearly as possible to natural sunlight, and modified in accordance with the rules laid down herein.

White Sunlight Best.

(2) Quality: As to the quality of light, there seems to be considerable disagreement or at least a misconception. Nature furnishes a physiologic basis for the quality of light best suited to our eyes for constant work. What is this light? Will anyone doubt that it is the pure sunlight, unadulterated by the artifices of man? The general character of sunlight may be said to be white, not colored by the excess of any one of the colors contained in this sunlight. It is true that this light as reflected from a green or ripened field of grain may become tinged with an excess of these respective colors. But the general atmospheric light around about us is not contaminated by color.

White sunlight is the natural stimulant of the optic nerve as well as of the growing organism, and any light that does not partly correspond in composition with white sunlight becomes defective by just so much, and may become a source of fatigue. Sunlight stimulates all the elements of the optic nerve equally. thus preserving the normal equilibrium and comfort. One may indeed find comfort while working with green or yellow light, yet when returning to the normal light a distinct sense of irritation will be noticed. The normal eye demands normal light for its best endurance and health.

The Value of Reflection.

Many schoolrooms throughout the entire day and nearly all rooms for a portion of the day have no direct sunlight and all the light received comes entirely by reflection. Light colored surfaces are, therefore, the best reflectors disturbing the composition of sunlight, at the same time reflecting the largest number of rays. It thus becomes a matter of no little importance that the surroundings of school buildings be as free as possible from strongly colored reflecting surfaces. Each substance has its effect upon the light which it reflects. Some of this is absorbed and that which is reflected carries with it the effect of color characteristic of the reflecting object.

Concerning the function of light when it

(Continued on Page 18.)

School Board Tournal

THE AMERICAN School Board Journal

DEVOTED TO

School Boards, School Officials and Teachers

Editor and Publisher WM. GEO. BRUCE Montgomery Building MILWAUKEE OFFICE Entered as second class mail matter in the Postofi Milwaukee, Wis.

NEW YORK OFFICE
W. J. LAKE, REPRESENTATIVE 3 East 14th Street

CHICAGO OFFICE - 56 La Salle Street
H. B. BOARDMAN, REPRESENTATIVE

SUBSCRIPTION, \$1.00 A YEAR ISSUED MONTHLY

PLANS OF ORGANIZATION.

It is interesting to note the tendency in the larger cities in the matter of school board organization. There was a time when district or ward representation was the common rule. The elective system, too, applied in almost every instance.

But the tendency has been in the direction of appointive school boards, and where the elective system is still in vogue, the feature of representation at large has been accepted.

Again, the school administrative bodies in the larger cities have been reduced in size. In many instances the number of school board members has been reduced by more than one-

The twenty largest cities in the country, using the official figures of the United States Census Bureau of 1903, are given here, and for each is stated the number of members in its school board, whether elected or appointed, and whether chosen at large or from wards or districts:

New York City	46—Appointed—At large
Chicago	21-Appointed-At large
Philadelphia	15-Appointed-At large
St. Louis	12-Elected -At large
Boston	5-Elected -At large
Baltimore	9-Appointed-At large
Cleveland	7-Elected -At large
Buffalo	Has no school board
San Francisco	4-Appointed-At large
Pittsburg	39-Elected -Wards
Cincinnati	30-Elected -Wards
Milwaukee	12-Elected -At large
Detroit	17—Elected —Wards
New Orleans	20-Appointed-At large
Washington	9-Appointed-At large
Newark	30-Elected -Wards
Jersey City	13-Appointed-Mixed
Louisville	14-Elected -Dist'cts
Minneapolis	7-Elected -At large
Indianapolis	5-Elected -At large

Out of these twenty cities ten have boards larger than 12, nine have boards of 12 or less, one (Buffalo) has no board at all.

Of the three largest cities, having more than one million people each, Philadelphia has only 15 members; Chicago has 21, but the new Chicago charter, which has recently become a law, fixes the number of members at 15.

Thirteen out of nineteen of these cities have their school boards elected from the city at large; one selects partly from districts or wards and partly at large; four select the members from wards and one selects its members from districts. One of the ten cities having a larger board has 13 members and another has only 14.

Several of the cities having small or middle sized boards, St. Louis, Boston, Cleveland, Washington, Minneapolis and Indianapolis, are known the country over for their progressiveness in school affairs and for the excellence of their schools, while another of these cities, Baltimore, has been making tre-

mendous progress in improving its schools since the change in its school law a few years ago, which gave it the board it now has in place of a large board chosen by wards.

The cities which have large boards, like Pittsburg, Cincinnati, New Orleans and Newark, are more noted for other things than for the excellence of their public schools.

The citizens of Detroit, one of the cities having a large board elected by wards, have been asking the legislature during the past winter to change their school law so as to give them a smaller board elected at large.

A number of cities in this list of twenty have within a comparatively few years changed their systems of school organization from large boards elected by wards to small or middle sized boards elected at large. Among the cities which have made this change are Philadelphia, St. Louis, Boston. Baltimore, Milwaukee and Indianapolis.

IN THE FIELD OF SCHOOL ARCHI-TECTURE.

It is well to discuss periodically the subject of school architecture. The school public is vitally concerned in all that makes for progress in this important field. Every school board does not necessarily have to deal with the subject, but many of them do, and when the time comes to provide for a new school building certain information is imperative.

The mistakes made in planning and constructing a school must be traced to school boards. A poor schoolhouse may be due to an inefficient architect, but the selection of an inefficient architect is due to the school board. Thus, school boards are responsible for the school architecture of the country.

Experience has taught that the subject, in a general way, receives but little attention at the hands of the average school board member. When the question of a new building comes up for discussion there is usually a great lack of information on the subject, nor can it be expected that every member be an expert.

But there should be enough knowledge on the subject to avoid the more serious errors into which school authorities are apt to fall. Reliable literature on the subject should always be at hand, and the leading essentials of a modern school building should be clearly understood.

It will cost no more, in dollars and cents, to build a good schoolhouse than it does to erect a poor one. To meet in the largest measure the functions of a school building is not a difficult task, if rightly approached. The school board that must undertake the construction of a new building requires first of all a reliable guide, not only as to the essentials to be dealt with, but also as to what steps to take in the preliminary stages of the work.

The inexperienced and frequently glibtongued architect, with showy drawings and sketches, is always present. But, the greater danger arises when the influential local architect, who may never have seen a real school building, brings pressure to bear on the school board. With an inexperienced architect and an uninformed school board the result is liable to be a disastrous one.

The readers of this journal have, from time to time, been furnished with the best thought

on school architecture. The present number emphasizes the most recent types of school. houses, and coming as they do from some of the best experts in the country, should receive the highest attention.

The editors of this journal stand ready to assist any school board throughout the country with practical suggestions regarding the subject of modern school architecture.

TAXATION FOR SCHOOL PURPOSES.

"Underlying every other question in connection with a system of public free schools is the problem of revenue. In considering the matter of revenue there are two aspects to the question. First, a sufficiency of revenue, and second, the proper administration of

This is an extract from an address delivered by a Texas educator who urged a more liberal tax income for educational purposes in his state.

It may be laid down as a sound proposition that the wise expenditure of school moneys will loosen the public purse towards greater liberality. Or, in other words, the unwise disposition of school funds tends to parsimony on the part of legislators who are asked to make provisions for the schools.

As far as the public is concerned, it may safely be assumed that even liberal expenditures are endorsed, provided they prove wise expenditures as well. Measures involving an increased tax burden are always opposed, and it is but natural and proper that this should be so. It prompts care and caution and leads to a more equitable solution.

But, measures designed to improve the educational interests, although attacked by the disgruntled taxpayer or calamity howler, are usually followed by public approval. Few public men have ever been unjustly dealt with for having aided educational effort with the proper financial support.

The timid public servant may shrink from criticism, but the strong and far-seeing man always clings tenaciously to sound policies making for educational progress.

A state school tax levied on the taxable wealth of the commonwealth and redistributed on the basis of school population has proven a wise and sound measure. But no school district should escape the burden of taxation entirely. Hence, a system of direct local taxation for the maintenance of the school is necessary. It prompts the citizen who contributes his share in a direct tax to manifest a deeper interest in the schools of his district. Nor would it be just to tax one section of a state so heavily as to exempt another section entirely.

In conclusion, we can only reiterate that wherever the question of stronger support for the maintenance has become an issue, fairly presented and ably fought, the people have arrayed themselves on the side of the schools.

THE N. E. A. AND THE RAILROADS.

The National Educational Association has for years managed its financial affairs in a thrifty manner and has now a fund of approximately \$150,000.00. This fund is wisely invested and yields a steady income.

One of the purposes in accumulating this fund was to provide for a rainy day. The favorable arrangements which have existed How the

for years w

which the la the associati lieved, come in that event promoting it The disce

with the rai cision of th sion the road membership The decis

mission has former prac ing over to ciations, a p purchasers tions payab and unlawfu

The pract rate for the Educationa round trip on every ti ciation as convention delphia, bu to add a m collect it fo

Western willing to association Los Angel and circula of the lin



School Sound Townal



umber

school. ome of ild re-

ady to counng the

OSES n conschoole dering aspects f revetion of

deliv-

a more urposes

osition

moneys

greater

unwise

simony

sked to

it may

xpendi-

ve wise

ing an

ed, and

should

d leads

he edu-

ler, are

alt with

ith the

k from

ng man

policies

taxable

ributed

proven

school

axation

al taxa-

is nec-

o connanifest nis disne secnpt an-

te that ort for , fairly ave arpools.

OADS. ion has rs in a

s wisely

ng this

existed

Few

How the public is treated by some School Boards.

the association, would some day, it was bepromoting its annual income.

The discontinuance of the arrangement

The decision reads as follows: "The commission has expressed the opinion that the former practice or custom of carriers in turn ing over to your association, or to similar associations, a part of the sums collected from the nurchasers of tickets as dues or other obligations payable to such association is improper and unlawful."

The practice referred to is that of making a rate for the annual convention of the National Educational Association of one fare for the on every ticket sold to the educational association as a membership fee. This year the convention was to have been held in Philadelphia, but the eastern lines refused longer to add a membership fee to their rates and to collect it for the association.

Western roads indicated that they would be of the lines agreed to the collection phase



June Again .- From Harper's Weekly.

only after certain officers of the association had written them, saying they had tried to get a ruling of the commission on the question and had failed.

It has been said that this ruling threatens the life of the association. This is scarcely true. While the association's income will be greatly minimized, it will not be sufficient to endanger its existence.

There are enough loyal school people in the United States to support so useful an organization as the National Educational Association. It would indeed be a sad commentary on the professional spirit of the educational forces of the country if it could be said that the life and perpetuity of its leading association — the most powerful educational body in the world—rested wholly upon the action of the railroads.

The National Educational Association will continue to live and render useful service to the cause of popular and higher education in the future as it has in the past.

TEACHERS JUMPING CONTRACTS.

One of the complaints frequently made by school boards in the rural districts arises out of the violation of contracts made by teachers. The latter engage themselves to teach for the term, sign a contract to that effect, and even before entering upon their duties, accept another position promising either better remuneration, pleasanter surroundings or more agreeable labors.



The book trust is ousted from the Pittsburg schools.

There is no doubt a strong temptation on the part of the teacher to violate an undesirable contract in order to accept a more advantageous one. But a sense of honor must guide here as in all other affairs of life where faith and honesty are involved. A teacher who has any regard for character or a proper conception of the mission of the profession, cannot be tempted to yield to the temptation.

School boards confronted with the awkward situation of the opening of a classroom without a teacher are apt to inquire for the remedy. From a legal point of view there is perhaps no adequate remedy. A teacher may sue a school board for violation of contract and recover, but a school board is less likely to recover on a suit that has been won. Nor has it been a custom to bring suit against a teacher who has broken a contract.

School boards might adopt a retaliatory measure in excluding from their service all teachers who have become guilty of a violation of contract. In that case, the repentant teacher would be punished as well, besides establishing a blacklist, which could hardly be tolerated in this age.

The only real remedy must be found through the efforts of educators in stimulating a high sense of honor and a strong professional spirit among the rank and file of teachers. When these exist contract violators will be unknown.

To defraud a child of an education is a greater crime than theft.



Contributions gratefully accepted.



The Pennsylvania schools and the State Capitol loot.



The attitude of colleges to wealth-as viewed by the Commoner.

for years with the railroad companies, by which the latter collected the annual dues for lieved, come to an end. The association would, in that event, lose the most effective means of

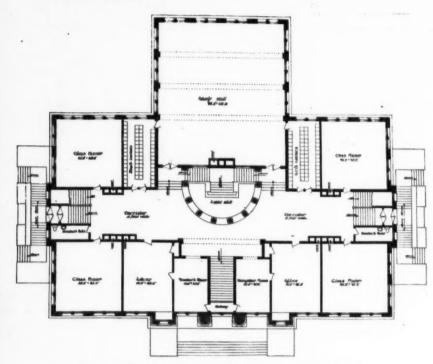
with the railroads has come. By a recent decision of the Interstate Commerce Commission the roads are not permitted to collect the membership fee any longer.

round trip plus \$2, and then turning over \$2

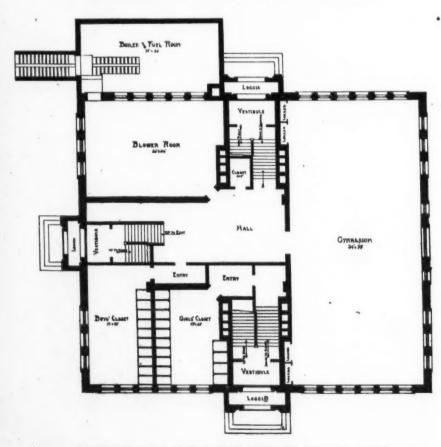
willing to continue the practice, inducing the association thereby to locate its meeting at Los Angeles, and the rates have been made and circulars issued advertising them. Some



NEW CENTRAL HIGH SCHOOL. HAMILTON COUNTY, TENNESSEE.
Adams & Alsup, Architects, Chattanooga, Tennessee.
(See description page 23.)



FIRST FLOOR PLAN, HAMILTON COUNTY HIGH SCHOOL.



BASEMENT PLAN, NEW SCHOOL BUILDING, VIRGINIA, MINN. (See opposite page.) $\,$

CLASS FROM

CLASS

SECOND FLOOR PLAN, HAMILTON COUNTY HIGH SCHOOL.



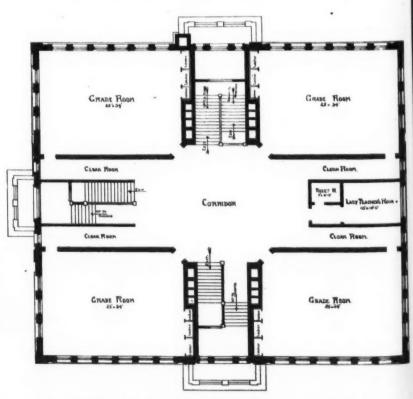
GROUND FLOOR PLAN. HAMILTON COUNTY HIGH SCHOOL.

Ш

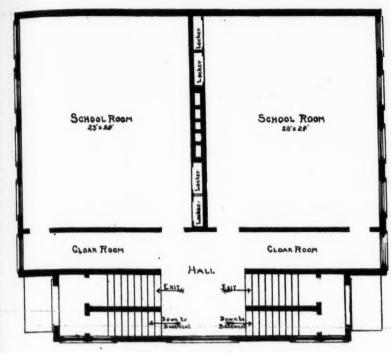
W.R.PARS And DES,MoinES,

SID

SECO



FIRST FLOOR PLAN, NEW SCHOOL BUILDING, VIRGINIA, MINN.



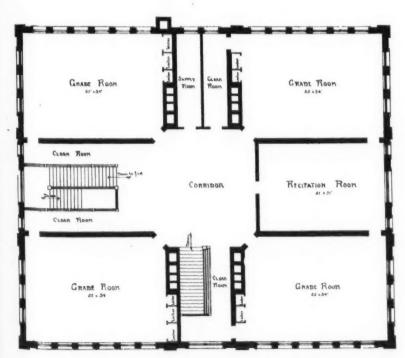
FLOOR PLAN, NEW TWO ROOM SCHOOL, HIBBING, MINN.



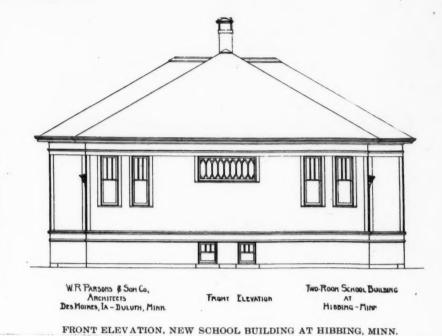
SIDE ELEVATION, SHOWING ARRANGEMENT OF WINDOWS.

AT HIBBING - MINN

SIDE ELEVATION

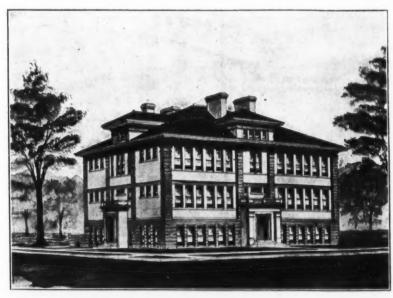


SECOND FLOOR PLAN, NEW SCHOOL BUILDING, VIRGINIA, MINN.

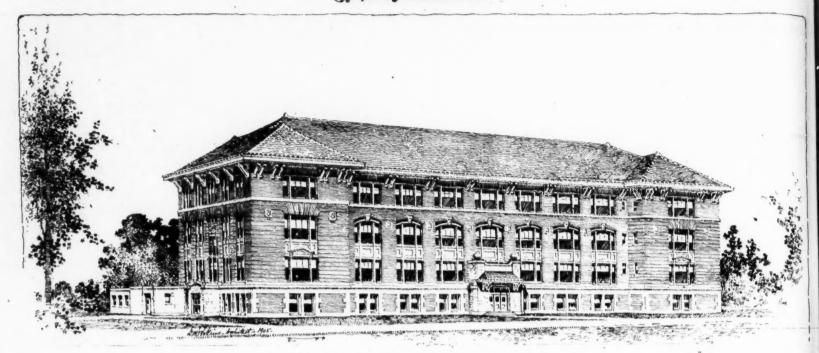


Boys' Toilet Room. GIALS' TOILET ROOM

BASEMENT PLAN, NEW TWO ROOM SCHOOL, HIBBING, MINN.

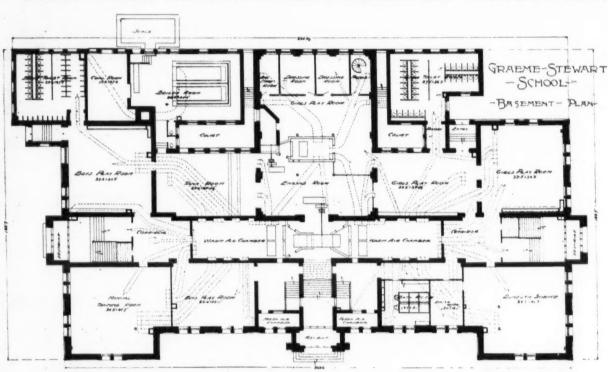


PERSPECTIVE, NEW SCHOOL BUILDING, VIRGINIA, MINN. W. R. Parsons & Son Co., Architects. (See other plans on opposite page.)



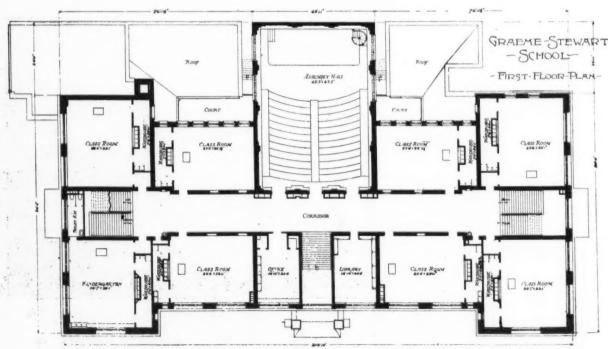
THE GRAEME STEWART SCHOOL, CHICAGO, ILL. Mr. Dwight Heald Perkins, Architect.

This building is a fine example of the newest type of grade schools now being erected in Chicago. It is fire-proof in construction and will accommodate nearly 1300 children.



BASEMENT PLAN, GRAEME STEWART SCHOOL. CHICAGO.

The toilet rooms and the boilers are outside the main structure.



FIRST FLOOR PLAN, GRAEME STEWART SCHOOL, CHICAGO.

SCHOOL ADMINISTRATION DE PARTMENT MEETING.

The program for the department of school administration of the National Education Association has been completed and given out for publication. Three papers covering important topics in school board work have been selected for the first session. The second session will be a joint meeting with the Department of Library Education, at which the school board management of public libraries will be discussed from the view point of the school board and of the librarian.

THURSDAY MORNING, JULY 11.

1. Where Should the Authority of

1. Where Should the Authority of the Superintendent Begin and End —Rufus Cage, Member Board of Education, Houston, Tex.

2. The School Board's Attitude Toward the Press—Chester H. Rowell, Editor Daily Republican, Fresno, Cal.

3. Pacific Coast School Architecture—Louis S. Stone, Schoolhouse Architect, San Francisco, Cal.

Discussion — Mr. Frederick H. Heath, Schoolhouse Architect, Tacoma, Wash.; James Stephen, Schoolhouse Architect, Seattle, Wash.

FRIDAY MORNING, JULY 12
(a) From the Viewpoint of the School Board—Hon. J. L. O'Brien State Superintendent Public Instruction, Lincoln, Neb.

(b) From the View Point of the Librarian—James H. Canfield, Librarian, Columbia University, New York City.

Discussion—W. C. Patterson, J. M. Guinn, Members of Board Education, Los Angeles, Cal.; E. Shorock, Member Board of Education. Seattle, Wash.; Calvin N. Kendall. Superintendent of Schools, Indianapolis, Ind.; Mrs. Josephine A. Goss.

apolis, Ind.; Mrs. Josephine A. Gos, The officers of the department are: President, Supt. J. W. McClymonds, Oakland, Cal.; vice-president, Grafton D. Cushing, Boston, Mass.; see retary, Wm. Geo. Bruce, Milwauke.

Any information regarding the program, place of meeting, etc., will be cheerfully furnished by the secretary of the department.

CLASS ROOM 24-119/ x 31-119

CLASS ROOM

<

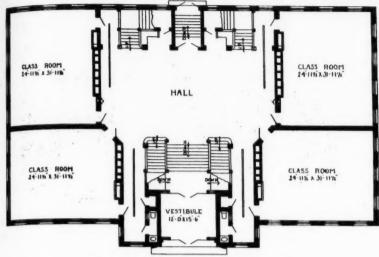
CEMEN The plan building w

Jackson B Mason City tion and school cons design, Mr ing a hap practical, to its best planned th

In the ditails of incontrol, farents, to those of City schools may be

tive drawi

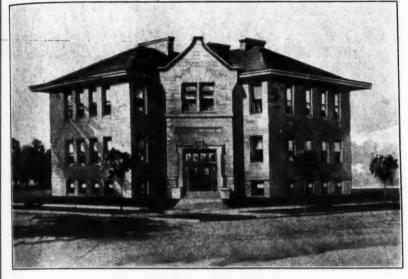
School Sourd Tournal



FIRST FLOOR PLAN, WHITTIER SCHOOL.



(Description page 25.) WHITTIER SCHOOL, HARVEY. ILL.
G W. Ashby, Architect, Chicago.



hildren. TION DE

partment of he Nation has been for publicavering in-

poard work e first seswill be a Department which the of public

from the

board and

uthority of and End

int of the

nfield, Li-

rsity, New

terson, J

oard Edu

E. Shor-

Education

. Kendall.

s, Indian

e A. Goss,

tment are:

Clymonds

ent, Graf-

Mass.; sec-

Milwaukee.

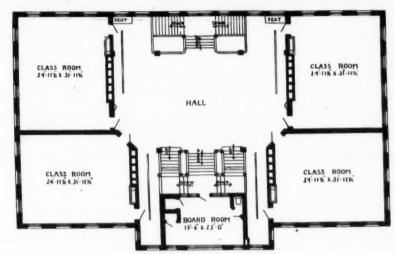
rding the

, etc., will

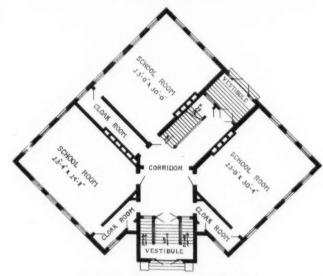
the secre

Artitude
r H. Rowan, Fresno,
Architectohoolhouse
Cal.
derick H.
teet, Tacoen, School
Vash.
IULY 12.
nt of the
Cublic In-

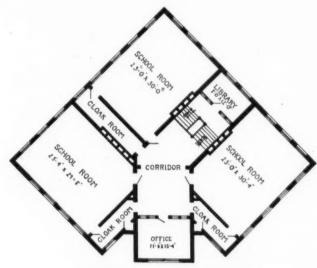
NEW SCHOOL, MASON CITY, NEB. G. W. Ashby, Architect.



SECOND FLOOR PLAN, WHITTIER SCHOOL.



FIRST FLOOR PLAN, MASON CITY.



SECOND FLOOR PLAN, MASON CITY.

CEMENT BLOCK SCHOOL HOUSE.

The plans for the concrete block school building were drawn by G. W. Ashby, 183 Jackson Blvd., Chicago, for a structure at Mason City, Neb. It is now in course of erection and is considered to be a model of school construction. In the treatment of the design, Mr. Ashby has achieved in this building a happy union of the ornamental and practical. The concrete block has been used to its best advantage and the interior is so planned that every inch of space is utilized.

In the designing of a school and in the details of its construction two factors usually control, factors that are most important to parents, teachers and pupils alike. They are those of light and ventilation. The Mason City school is generously provided with light, as may be seen in the accompanying perspective drawing of the building. Ample ventila-

tion also is provided for after the system recommended by hygienic authorities.

This building, on account of its durable construction, will withstand any force of the elements, and with the air space of the blocks in its walls will make the problem of heating in the winter a simple one. Thus comfort for the pupils is assured.

The pretentious entrance on the corner is regarded by the people of Mason City as a welcome relief from the stilted style usually seen in the conventional schoolhouse. The pupils will enter a broad corridor, amply wide for drills and school ceremonies of the modern curriculum, the width being 14 feet. Another broad entrance is provided at the rear. In all its details the building is designed to meet all the demands of city governments relating to safety from fires.

The basement wall to grade is concrete and

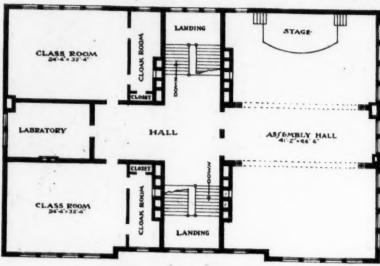
the walls of the buildings to the roof plates are of concrete blocks 12 inches thick, 32 inches long and 8 inches high. The roof is of stained shingles.

The interior is given a cheerful aspect by a Georgia pine trim with an oil finish, this treatment being regarded artistic and easier to keep clean than other styles of finish. The floors throughout are of hard maple. In the basement are toilet rooms equipped with modern plumbing arrangements, play rooms for use in stormy weather when children cannot get out at rest time, the boiler and fuel rooms.

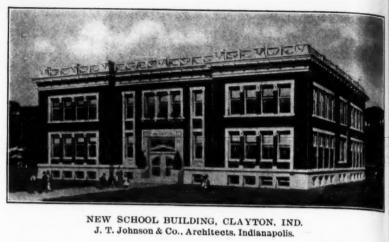
On the main floor, on the right and left of the main entrance, are cloak and hat rooms.

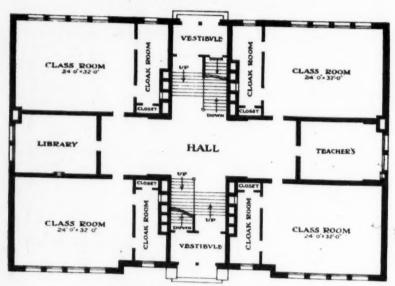
A wide stairway leads to the second floor, where are three school rooms of sizes corresponding to those of the rooms below them. Here also is a library at the rear and there is an office for the principal.

School Sourd Sournal

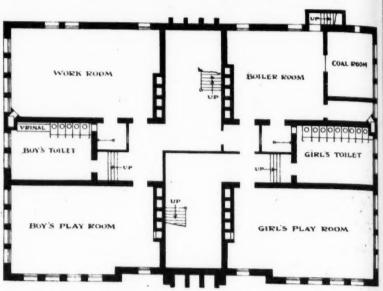


SECOND FLOOR PLAN, CLAYTON, IND.

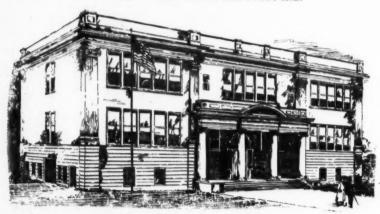




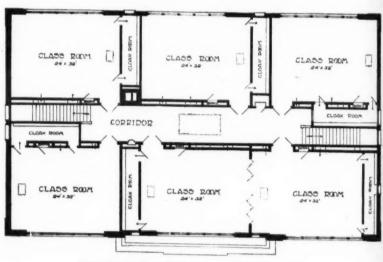
FIRST FLOOR PLAN, CLAYTON, IND.



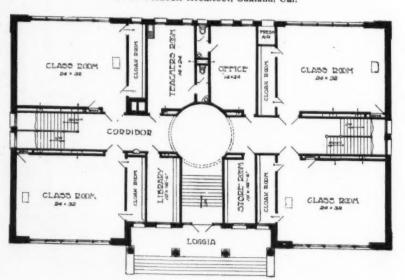
BASEMENT PLAN, CLAYTON, IND.



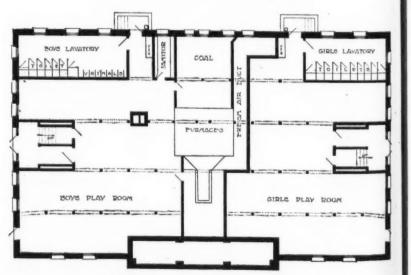
NEW EMERSON SCHOOL, BERKELEY, CAL. F. D. Vorhees, Architect, Oakland, Cal.



SECOND FLOOR PLAN, EMERSON SCHOOL



FIRST FLOOR PLAN, EMERSON SCHOOL.



BASEMENT PLAN, EMERSON SCHOOL.

PERSPECTIVE AND PLANS OF THE NEW EMERSON SCHOOL, BERKELEY, CAL.

(See description, page 25.)

F. D. Vorhees, Architect, Oakland, Cal.



Boston, Mas sebstitutes in t vised during th the principals substitutes. T absence from new system, th placed in cha central office the districts. is sent at once and a suitable in question. visor visits th all possible as Syracuse, N

adopted the re tee denouncing gerous to the vanced the ar throughout th the secret soci vocated. The in a peaceful societies orga school student regular work, ence of thoug proper social vided such so ty and conduc faculty. The state b

decided that law establishi throughout th commissioned that, unless s trary, local h a course in ex sioned high s named in the be taken to m tion of the ope Erie, Pa.

report grantin school permis who engages quired to file

School Soard Tournal

Among Brandski Glucation

Boston, Mass. The method of appointing substitutes in the schools has been radically revised during the present school year. Hitherto the principals of schools have found their own substitutes. This necessitated a good deal of absence from their regular work. Under the new system, the appointment of substitutes is placed in charge of a supervisor who has a central office connected by telephone with all the districts. When a teacher is absent, notice is sent at once to the Supervisor of Substitutes and a suitable substitute is sent to the school in question. During school hours, this supervisor visits these substitutes rendering them all possible assistance.

Syracuse, N. Y. The board of education adopted the report of the high school committee denouncing high school fraternities as dangerous to the school. While the report advanced the arguments which have been used throughout the country for the destruction of the secret society, no sweeping action was advocated. The entire difficulty is to be adjusted in a peaceful manner. The board approved of societies organized and conducted by high school students in such a way as to supplement regular work, develop self-control, independence of thought and action, and to meet the proper social demands of the student life provided such societies are approved by the faculty and conducted under the supervision of the faculty.

The state board of education of Indiana has decided that the studies listed under the new law establishing a uniform high school course throughout the state must all be offered in the commissioned high schools of the state and that, unless special reasons exist to the contrary, local high schools should not prescribe a course in excess of that named for commissioned high schools under the law. Music as named in the course of study outlined must be taken to mean a study and not a mere portion of the opening exercises of the high school.

Erie, Pa. The school board has adopted a report granting to the students of the high school permission to play football. Every boy who engages in the game will, however, be required to file with the principal of the school a

doctor's certificate of good health and the written consent of his parent or guardian. Football was prohibited recently as a result of the death of a student.

East Providence, R. I. The graduating exercises of the high school will consist of an address by a well known speaker and music by the members of the class.

Chicago, Ill. Citizens of Oak Park have presented a petition to the school board asking that the fraternities and other secret organizations among the high school students be abolished.

South Dakota. The state legislature at its session last winter enacted laws by which the membership of school boards will be reduced to five men. After July 1 district representation in municipalities will cease and school board members will be elected at large. State Superintendent Ustrud, in explaining the new law, stated that it was modeled after the Galveston, Tex., plan of municipal government by commission. The date of the annual school elections is also changed by the law from April to June

Mr. C. S. Poole, president of the Joplin school board, has been made chairman of the school board section of the Missouri State Teachers' Association. Mr. Poole was recently re-elected for the fifth term as president of the Joplin board.

Bluffton, Ind. The school board has arranged to hold special classes for a month after the close of the regular school year. Children who lost time on account of sickness or for other reasons will be permitted to attend.

Louisville, Ky. The school board has increased the salary of Supt. E. H. Mark from \$4,000 to \$5,000 per year.

A ONE-ROOM RURAL SCHOOL.

Interest in schoolhouse construction has not been confined to the larger communities alone, but the past few years have seen considerable advances in the design and equipment of country school buildings. The isolation of the rural school, its size and the limited means at the disposal of the country districts have been factors retarding progress.

As a good example of the newer type of schools, which is rapidly replacing the "little red schoolhouse" of hallowed memory, may be mentioned the one-room rural school, erected by Mr. G. R. Laidlaw in District No. 5, Noble township, Wabash county, Ind. The architect has felt the necessity of following scientific rules upon which smaller as well as larger schools must be built, and has executed the desire of the township officers for the best which he could plan with due regard for economy in construction and operation.

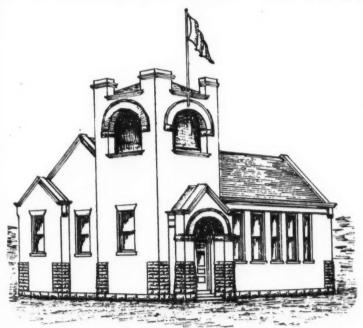
The entire expenditure which the district is making in erecting the building is \$2,183. This is comparatively small when we consider that the outer walls are of sand lime brick; the quoins at the corners of native limestone, with sills and spring blocks at the arches of Bedford stone. The foundation will be concrete.

The building is in general divided into three sections: a cloakroom, a furnace room and a classroom, the latter being 24x28 feet, with a seating capacity of forty pupils. In the interior appointments of the classroom the architect has striven to incorporate advanced ideas. 16.8 square feet of floor space are allowed each pupil, while the proportion of window area to the floor is five to one. The cubic feet of air space planned for forty pupils, while a bit below the standard, has been computed with this fact in mind, that the attendance never exceeds thirty children. For this number the amount is ample.

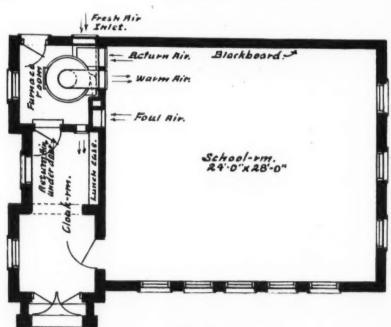
The heating system is certainly the best feature of the building. The hot air furnace placed in the corner room has been dropped fourteen inches below the level of the main floor. The heat is sent into the classroom 6 feet 6 inches above the main floor through a register, while the foul air is drawn from the room by another register at the floor.

It has been planned that the teacher before leaving the school at night will turn a valve in the air duct. This will close out the cold air, causing an internal system of ventilation with the furnace room, and the building will be kept warm at night with a minimum amount of fuel. As soon as the teacher arrives in the morning the air duct is again opened and the fresh air turned on.

The heating of the cloakroom is unique. A negister near the ceiling will, by natural radiation from the furnace, without pipe, fill this space with warmed air. The door between the furnace and the cloakroom is raised 4 inches from the floor to allow the air to return by circulation to the furnace room.







FLOOR PLAN.

School Sourd Journal



A LETTER FROM HIS GIRL.

He hurried up to the office when he entered the hotel, and without waiting to register, inquired eagerly:

"Any letter for me?" The clerk sorted a package with the attention that comes of practice, then threw one-a very small one, on the counter. The agent took it with a curious smile that twisted his pleasant-looking face into a mass of joyful expectancy. He smiled more as he read it. Then obvious of other men who jostled him he laid it tenderly against his lips and actually kissed it loud guffaw started him.

"Now look here, old fellow," said a voice, "that won't do, you know. Too spoony for anything. Confess, now, your wife did not write

that letter."

"No, she didn't," said the traveling man with an amazed look as if he would like to change the subject. "That's a letter from my best girl." This admission was so unexpected that the trio of friends who had caught him said no more until they had eaten a good dinner and were seated in the chum's room they began to badger him.

"It's no use; you've got to read it to us, Dick," said one of them. "We want to know all about your best girl."

"So you shall," said Dick, with great cool-

"I will give you the letter and you can ness. read it for yourself; there it is," and he laid it on the table.

"I guess not," said one who had been loudest in demanding it. "We like to chaff a little, but I hope we are gentlemen. The lady would hardly care to have her letter read by this crowd."

"But I insist on it," was the answer. "There's nothing to be ashamed of except the spelling." "That's a little shaky, I'll admit, but she won't care in the least. Read it, and judge for your-

Thus urged, the latter took up the letter and read it. There were only a few words. First he laughed, then swallowed suspiciously, and as he finished, threw it on the table again, and rubbed his hands across his eyes.

"Pshaw!" he said, "if I had such a love let-

ter like that—

"Fair play!" cried one of the others, with an uneasy laugh.

"I'll read it to you, boys," said their friend, seeing they made no move to take it. And this is what he read:

"Mi owen deer Pa Pa, I sa mi PRairs every nite and wen I kis your Pictsure I Ask god to bless you good Bi Pa Pa yure best gurl.

Dolly."

For a moment or two the whole company had hay fever.

AMONG BOOKMEN.

Mr. J. A. Hoppe has severed his connection with Ainsworth & Company and has become associated with the Keystone Book Company. He represents the new firm in Minnesota, Wisconsin and the Upper Peninsula of Michigan.

Mr. Chas. J. Britton acts as high school agent for the American Book Company in Southern Indiana and Illinois. Mr. Britton lives at Terre Haute.

Mount Vernon, Ill., is the home of Mr. W. D. Piercy of Maynard, Merrill & Company.

Mr. Turner E. Smith, formerly principal of

the Emerson school at Oklahoma City, Okla., represents Maynard, Merrill & Company in Oklahoma, Indian Territory and Texas. He is associated with W. W. Robertson, general agent in the new state of Oklahoma.

Mr. Lucien V. LaTaste has severed his connection with Silver, Burdett & Company

general Texas agent.

Mr. W. L. Bonney represents the American Book Company in New England. Mr. Bonney formerly held the position of principal at Fort Fairfield, Me.

The Kansas state adoption brought together in Topeka at least forty members of the book fraternity. The list included some of the most important men in the educational publishing field. Among the prominent representatives

American Book Company-L. M. Gilman, A. J. Clancy, E. Hoenshell.

D. Appleton & Co.—Otto Focht, Geo, Booth. Eaton & Co.—Ira T. Eaton, E. A. Schultze. Charles Scribner's Sons—H. C. Cheney, T. F. Lyman.

Scott, Foresman & Co.-G. Scott, H. A. Foresman.

Silver, Burdett & Co.-Haviland Stevenson, Oliver Stigall.

Ginn & Co.-Stuart Eagleson, E. E. Heits-

B. H. Sanborn & Co.-Wm. Young, C. H. Blackburn.

D. C. Heath & Co.-W. H. Ives, R. S. Pem-

The Macmillan Co.-Frank Hummell.

Mr. F. L. Manasse has been representing the Educational Publishing Company in Oklahoma during April and May and will probably remain in the southwest during the summer. In the fall, he will again take his regular territory in Wisconsin.

Mr. E. W. Harvey, who had charge of New Jersey for D. C. Heath & Co., has been transferred, at his own request, to Ohio. Mr. Harvey will succeed B. E. Richardson, as general agent, and will make his home at the Lenox Hotel, Columbus. Mr. Pierpont, formerly superintendent of schools at Logan, O., will be associated with him.

Veteran Publisher Dies.

Mr. C. M. Barnes, widely known as the founder and president of the C. M. Barnes Publishing Company, Chicago, died at Seattle. Wash., May 9. Heart failure was the cause

Mr. Barnes retired three years ago and was, at the time of his death, 74 years of age. He is survived by a wife and five children, two of whom, Mrs. W. E. Dodds and Dr. S. D. Barnes, reside in Chicago.

A SCHOOL BOARD SPECTACLE.

To see the school board of the second city in the United States held up to the country at large as a discarded and discredited public body by the authorities and by a portion of the press and the public, and stamped as an incompetent and unsafe body, is a rare and de-

The city of Chicago has offered within the past month one of the most unique spectacles in the history of this country. The majority of the school board of that city has been dismissed by the mayor of the city, who holds the power to dismiss as well as to appoint members of the school board. And what is more remarkable is the fact that the best public sentiment is behind him.

Two years ago Mayor Dunne yielded to the radical element of the city in the appointment of members of the school board. He appointed the most radical and succeeded during a two years' term of office in creating a school board

that excelled in point of uniqueness anything ever offered upon the American continent the field of school administration.

In its entirety it was the most picturesque collection of theorists, original and honest in tendency, grotesque and startling in character, helpless yet obstructive in operation, that ever held down a set of school administration chairs Their progressive spirit tended to a form of idealism that was not designed to fit mundane conditions. They dealt with ideals far beyond the reach of man.

Mayor Dunne meant well. He selected the leaders from the various shades of radicalism. They held to schemes of democracy that had run to seed and had gone to extremes in a new form of democracy for which no new modern lexicographer had as yet found a word or form of expression. The priestess of that new cult predominated; she directed with an energetic hand and a distorted brain; the executive head and the administrative hand were to be on and the same.

The school administrative function was t be vested in the schoolmarm. School board were henceforth to be discarded. Every teacher could serve as a miniature school board, govern, manage, direct and teach, all at the same time. Why not?

Mayor Dunne prided himself upon the fact that during the teamsters' strike the strong executive arm of the chief of police directed affairs and prevented chaos and calamity. "Without Chief Collins I could not have man aged the police department, and without the police department I could not have maintained order in the city."

The writer, to whom he expressed this state ment, asked him whether the police department left to itself, without an executive body be hind it, would have done as well. His reply was in the negative.

Neither can a large teaching body conduct the schools without a directive head. There must be a system of government over the schools of any large city in order to make them effective, and the governing factors must consist of men who are clear and level headed, progressive in thought and action.

FLY TO PIECES.

The Effect of Coffee on Highly Organized People.

"I have been a coffee user for years, and about two years ago got into a very serious condition of dyspepsia and indigestion. It seemed to me I would fly to pieces. I was so nervous that at the least noise I was distressed. and many times could not straighten myself up because of the pain.

"My physicians told me I must not eat any heavy or strong food and ordered a diet, giving me some medicine. I followed directions care fully, but kept on using coffee and did not get any better. Last winter my husband, who was away on business, had Postum Food Coffee served to him in the family where he boarded

"He liked it so well that when he came home he brought some with him. We began using it and I found it most excellent. While I drank it my stomach never bothered me in the least, and I got over my nervous troubles. Postum was all gone we returned to coffee, then my stomach began to hurt me as before and the nervous conditions came on again.

"That showed me exactly what was the cause of the whole trouble, so I quit drinking coffee altogether and kept on using Postum The old troubles left again and I have never had any trouble since." "There's a reason." Read "The Road to Wellville," in packages.

Drawing with By D. R. Drawing." 6 Co., New Yo cisco. This little

twice that r series of sug ment of the dren during

As a med mended beca the simplicit necessitates a them within

The aim o and how to t

The sugges are reasonabl and would trained teac doubtless qui the channels get the ima plan depend than modern ing techniqu to be expres

The use even though gestions for scales and h

Altogether source of m and, if wise cational val

From Trail Through t Brigham, A gate Unive Cloth. 186 cents; mail

pany. Bosto

The author

viction that related and ject in com as a physion very often for which History, on a physical compilation a bond by sented in a to human

lachians p graphy by grades of t man class important and geogra est is, the later day 1 to the trai Boston a

From Tr

Point of th the Hudso is made a cf 1777. tral Railw Baltimore Ohio valle

School Sound Townal



Drawing with Colored Crayons.

By D. R. Augsburg, author of "Augsburg Drawing." 64 pages. Educational Publishing Co., New York, Chicago, Boston, San Francisco.

This little book of seventy pages and nearly twice that number of illustrations gives a series of suggestive exercises for the development of the use of colored crayons for children during the first three years of school.

As a medium, colored crayons are recommended because of the freedom they permit, the simplicity of color that their limitations necessitates and their cheapness, which placed them within reach of all.

The aim of the book is to teach how to use and how to teach the use of this medium.

The suggestions from a technical standpoint are reasonable and applicable to the low grades and would prove especially helpful to the trained teacher. The trained teacher would doubtless quarrel with Mr. Augsburg's idea of the channels through which the children should get the images from which they draw. His plan depends more upon copy and dictation than modern psychology would uphold, making technique more prominent than the idea to be expressed.

The use of simple, large masses of color, even though crude, is emphasized, and the suggestions for the making and study of color scales and harmonies are especially valuable.

Altogether this is a book that will be a source of much pleasure and profit to children, and, if wisely interpreted, of considerable educational value.

From Trail to Railway.

Through the Appalachians. By Albert Perry Brigham, A. M., Professor of Geology in Colgate University, Hamilton, N. Y. 12mo. Cloth. 186 pages. Illustrated. List price, 50 cents; mailing price, 55 cents. Ginn & Company. Boston, New York, Chicago.

The author of this book starts with the conviction that history and geography can be correlated and taught more effectively as one subject in connection with the other. Geography, as a physiographic treatise, it is stated, becomes very often so scientific that it loses the object for which it was placed in the curriculum. History, on the other hand, if taught without a physical setting, becomes an empty, barren compilation of dates and events. There is then a bond by which both can be united and presented in a new form. This bond is the return to human interest.

From Trail to Railway Through the Appalachians purposes to teach history and geography by taking students in the upper grades of the elementary schools and the freshman class of the high school through a most important section of this country, historically and geographically. The bond of human interest is, the present in contrast with the past, later day methods of transportation as opposed to the trails of the Indian trader.

Boston and the Berkshires are the starting point of the journey. The Mohawk valley and the Hudson river are soon reached and a stop is made at the scene of the Oriskany Battle of 1777. The Eric Canal, the New York Central Railway, the Pennsylvania Railroad, the Baltimore and Ohio Railroad, cities of the Ohio valley, the Cumberland Gap and cities

of the Southern mountains are all entered and described geographically and historically in a most interesting manner.

Thus the object and aim of the book is accomplished. Interest is stimulated and aroused in the co-ordination of subject, with the subversion of the burdensome. The bond of human interest—the gigantic railways—is perfectly linked with the ideals and desires of pupils of such an age and at such a point in life when the land of enchantment is the unknown beyond.

The Founding of Jamestown.

American History Leaflets No. 36. Edited by Albert Bushnell Hart and Edward Channing, Harvard University. 27 pages. Price, 10 cents. Parker P. Simmons, New York.

The American History Leaflets, edited by Albert Bushnell Hart and Edward Channing of Harvard University are too well known to require introduction. The student of history has used them for years back, has found them invaluable as sources, and refers to them faithfully in seeking accurate information. Every library in the United States of any note procures the American History Leaflets, and preserves them with care. They have become a necessity on the history shelf.

It is timely and appropriate that the present leaflet on The Foundation of Jamestown should appear. Never, perhaps, has an exposition been surrounded with so much history or designed to commemorate events so important in the life of the nation. Others, it is true, have celebrated epoch making events. Yet, for historic background and surroundings Jamestown surpasses them all.

The Leaflet No. 36 contains Percy's Discourse of Virginia and Wingfield's Discourse of Virginia. George Percy, eighth son of Henry Percy, Earl of Northumberland and brother of Henry Percy, the ninth holder of that title, came to Virginia with the first expedition and remained in the colonies until April, 1612, when he returned to England. His discourse is thus one of the original documents relating to the foundation of Virginia. The work of I'dward Maria Wingfield, godson of Cardinal Pole and Queen Mary Tudor, from the latter of whom he derived his middle name, stands equal in importance.

As a source this leaflet on The Foundation of Jamestown is excellent. The selections are original, the first having been taken from Purchas's "Pilgrimes," the second from the American Antiquarian Society's "Transactions." Thus they are official and original, placing the very kernel of the entire story in the hands of the student of history.

Exercises in Zoology.

A laboratory manual for students in high schools and academies, by Worrallo Whitney and Frederic Colby Lucas, with a series of projection exercises by Tracy H. Holmes, is published by Neeves Stationery Company, 543 W. 63d Street, Chicago.

This work is the best thing in the study of animal life which has been called to our attention. In this manual the loose-leaf plan is employed, whereby the exercises may be torn out page by page and bound in the note book opposite the answers. Definite laboratory exercises are given, each one of which involves the solving of a definite problem. Special arrangement is also made for field work and study of the living animal. The tabular form of review is introduced to enable the student to organize his knowledge by constant comparisons of new animals with those already studied. At the end of each exercise a glossary has been placed, giving the

derivation of each technical term used in the exercise. Throughout the manual many suggestions are made concerning models to be made by the pupil to increase the definiteness of his concepts; these are to be made of colored paper, or from modeling clay or plastic rubber. The fine arrangement of the entire work as well as the thoroughness with which the subjects are treated will be appreciated by all teachers and instructors.

Webster's New Standard Dictionary.

Elementary School Edition, published by Laird & Lee, Chicago. 384 pages, bound in cloth, 25c.

The Elementary School Edition, just off the press, makes a valuable addition to the series of dictionaries which Laird & Lee have issued during the past few years. This edition is designed especially for the use of children and is particularly adapted for the use of pupils in the lower grades of the public schools. It is set in large, clear type with vocabulary words in bold face. The system of diacritical marking has been simplified and a key to pronunciation is printed at the foot of each page. In addition to the 25,000 words and definitions the book contains a table of abbreviations in common use; rules for spelling and a table of American weights and measures. The text is illustrated with over 450 engrayings and two full page plates, one of planes and angles, the other portraits of every president of the United

This is the first time in the history of dictionary making that the children have had the opportunity of securing a lexicon containing all the essential features of the larger dictionaries for this remarkably low price.

The Greatest Fact in Modern History.

By Whitelaw Reid. 50 pages, 12mo. Cloth, gilt top. 75 cents, postage 8 cents. Thos. Y. Crowell & Co., New York.

The rise of the United States is the "greatest fact in modern history" treated in this book. Mr. Reid traces the chief forces which went into the building of the nation from the viewpoint of the diplomat. The fact that the book is a reprint of an address delivered at Cambridge University adds to the interest.

DOCTOR TALKS OF FOOD. President of Board of Health.

"What shall I eat?" is the daily inquiry the physician is met with. I do not hesitate to say that in my judgment, a large percentage of disease is caused by poorly selected and improperly prepared food. My personal experience with the fully-cooked food, known as Grape-Nuts, enables me to speak freely of its perits.

"From overwork, I suffered several years with malnutrition, palpitation of the heart, and loss of sleep. Last summer I was led to experiment personally with the new food, which I used in conjunction with good rich cow's milk. In a short time after I commenced its use, the disagreeable symptoms disappeared, my heart's action became steady and normal, the functions of the stomach were properly carried out and I again slept as soundly and as well as in my youth.

"I look upon Grape-Nuts as a perfect food and no one can gainsay but that it has a most prominent place in a rational, scientific system of feeding. Any one who uses this food will soon be convinced of the soundness of the principle upon which it is manufactured and may thereby know the facts as to its true worth." Read "The Road to Wellville," in packages. "There's a reason."

anything tinent in eturesque nonest in

character, that ever on chairs form of mundane ir beyond

ected the dicalism that had in a new modern lor form new cult energetic tive head

n was to ol boards y teacher ard, govthe same

be one

the fact trong exrected afcalamity, ave manshout the aintained

body bereply was
conduct
There
over the
ake them

nust con-

l headed.

partment

Organized
ears, and
y serious
tion. It
I was so

n myself

t eat any
et, giving
ons cared not get
who was
od Coffee
boarded
ame home
a using it
et I drank

When the to coffee, as before gain.

was the drinking Postumave never

reason.

ackages.

the least,

THE EYE OF THE PUPIL AND THE LIGHTING OF SCHOOLROOMS.

By James A. Bach, M. D.

(Concluded from Page 7.)

finally enters the schoolroom, it may be said that that which passes directly from the window to the eye is of no benefit except in so far as it renders the exterior of the room visible. After the light has passed into the schoolroom it is reflected from the walls, floors, furniture and occupants. The light which these various surfaces reflect gives impression of form and color by which objects are appreciated.

Now to preserve the light as pure as it entered, it will be readily seen that strongly colored surfaces in a schoolroom should be avoided. In fact no color, with the exception of neutral gray as may be necessary to modify the light, should be used on the walls, in curtains or other reflecting surfaces. This, containing all the elements in proper proportion to pure, white sunlight, does not disturb the composition of light and yet enables a variation of the amount of light by varying the degree of the shading of gray in the window shades. It may be true that gray as a color looks uninviting and cold, and to avoid this in a degree the slightest modifications only ought to be allowed, such as olive gray or tan gray.

Direction and Final Diffusion.

(3) Direction: The most favorable direction in which light can enter a schoolroom is probably from above. Unfortunately, however, this is impossible in most buildings except for the uppermost floor. As related to the eyes, all light that is not reflected directly from the work can only be a source of annoyance. If it be direct light that strikes the eye, the retina becomes unduly irritated, and cannot properly perform its function. Reflected light, as well, irritates the retina excessively and often causes a confusion of the letters on the printed page with the images of other objects from which it may be reflected. For this reason blackboards, which should always be dull in finish, must never be placed between windows, as the direct light from the windows will in their use be a source of greatest discomfort to the eyes of the pupil. Light coming from below the level of the work or the head of the child is often worse than useless.

Hence it can readily be seen that light should enter in such direction that it strikes the work of the pupil from above and from the left side. Light from the right side or back is, as a rule, objectionable because it casts shadows from head and shoulders over the work. To insure an abundance of light eastern and southern exposures are best, while northern would probably be next in order. Western light is not very desirable, owing to the difficulties encountered in its control. To increase the general lighting possibilities, partially diffused light from the rear of the room, but from as high a level as possible, may be allowed. If the rooms are properly arranged, sufficient light will come from the left without resorting to other

It will be noted that as the light strikes the page from the left it is reflected at the same angle at which it touched it. This light does

not pass on as so much useless light, but as it passes from surface to surface, lighting the room, by millions of reflections and reflections until finally, becoming thoroughly diffused throughout the room, each nook and crevice is equally well illuminated. Thus, when this light is so strongly diffused, it casts no shadows, is sufficient in quantity, and, if the reflecting surfaces are free from color, is non-irritating in quality. This is the ideal light, as has been amply shown. If closer attention were paid to its proper supply many if not all of the aggravating eye strains and irritations could be avoided.

HEATING AND VEN-TILATION OF SCHOOL BUILDINGS By Thomas S. Ainge, Sanitary Engineer, Michigan Department of Health.

(Continued from Page 5.)
possible without the
use of furring strips,
to conduct the vitiated
air under the floors
to flues on inside walls.
Further, if the joists
were laid at right angles

to the walls in question, and ducts, connecting the registers with the flues on inside walls, could be constructed between the joists, the two square turns which the air would have to make in each duct, together with the distance which the air would have to travel horizontally, would tend to a sluggish flow in the ducts and flues.

If the air entering the room is of proper temperature, and its distribution throughout the room sufficiently rapid, the cooling effect of the outer walls and windows will not, ordinarily, be perceptible to the lower extremities of the occupants. In rooms having considerable exposure, or very large windows, it would be well to place steam coils or radiators, on the most exposed sides of the rooms to counteract the cooling effect of the walls and windows.

A common practice, and one that is responsible for the failure of many ventilating plants, is the connection of the vent flues of several rooms with one main flue in the attic. Another method which is equally objectionable, is the termination of the vent flues at the attic floor and the provision of openings in the roof, or gables, for the removal of foul air, from the attic. Each vent flue should have a separate outlet to the air above the roof, but for con-

THE COMMERCIAL DEPARTMENT
Is Our Field

GREGG SHORTHAND

Is Our Specialty

If you teach commercial subjects or if you want to add a commercial course to your school, write us. We can supply you with a competent teacher of commercial subjects without expense.

Write for a free copy of "SHORTHAND IN THE PUB-LIC SCHOOLS."

The Gregg Publishing Co. CHICAGO

venience and architectural appearance several flues may be grouped, and pass through the roof as one stack.

In some of the older school buildings it was the custom to ventilate rooms, in some instances on different floors, by one common vertical flue. If the smoke flue is placed in this common vent flue, and the weather conditions are not unfavorable, there may be a fair draft, but there will be times when the draft will be fickle and the ventilation of some, if not all, of the rooms insufficient. Each room should be provided with a vent flue separate and distinct from that of any other room.

(To be Concluded in July Number.)

Supt. Edward P. Moses of Raleigh, N. C., will retire at the close of the present school year. Mr. Moses has held the office since 1876.

Wooster, O. Supt. Charles Hanpert has resigned and the school board has elected E. L. Thompson of Washington Court House as his successor.

JUST PUBLISHED

THE DEWEY SPELLING BOOK

By EDWARD M. McLOUGHLIN Principal Dewey School, Chicago

If you are contemplating the use of a spelling book, it will pay you to become acquainted with this one.

Cloth. 150 Pages. Mailing Price, 30 Cts.

Educational Publishing Company 228 Wabash Ave., Chicago 18 E. 17th St., New York

50 Bromfield St., Boston

2046 Center St., Berkeley, Cal.

keeper,
The second of the seco

Interesting Dev on the Right The right to

THE DI

"Webster" in coof dictionaries, til a few years been used in a tion of cheaper Noah Webster, a better grade ry and controve the higher cour

Long ago I twenty years I this book wa twenty-eight yhe revised ar when, three years C. Merriam unsold edition working over the old Webs & C. Merriam out better di Webster Inte

In 1889 the dition of Vand the next is reprints of on the mark very low prepies of the wanted a chrealized that reference boo

When thee G. & C. M sale and ma the name, W name." The them and he pired, neither longs exclusionally held of In 1894, Chicago, beg

the Noah V copyright e basis, adde producing a a large one to research proper co-v

the Riverside Literature Series — 190 Volumes

It contains more copyrighted material than any other literature series for school and college use.

It contains the enly authorized school editions of Longfellow, Whittier, Hawthorne, Lowell, Holms Emerson, and other American authors.

Its annual circulation, which has more than doubled in 12 years, is now over 1,100,000.

It is used in every State, Territory, and Dependency of the United States and in all the Provinces of Canada.

Prices, 15 cents, paper, or 25 cents, cloth, for each of 150 volumes; and upwards for each of 40 other volumes.

Proc upon Request — an illustrated Catalogue with complete Table of Contents.

HOUGHTON, MIFFLIN @ CO. BOSTON NEW YORK CHICAGO



THE DICTIONARY CONTEST.

Interesting Developments Within the Past Year on the Right to Use the Name Webster.

The right to the exclusive use of the name Webster" in connection with the publication of dictionaries, was not seriously contested until a few years ago. The name "Webster" had been used in a promiscuous way in the production of cheaper editions, but the use of the name, Noah Webster, as author, compiler or maker of a better grade of dictionary led to fierce rivalry and controversy, which found their way into the higher courts of the land.

Long ago Noah Webster gave more than twenty years of his life writing a dictionary. This book was copyrighted and protected for twenty-eight years. Shortly before his death he revised and improved his dictionary, but when, three years later he died, the firm of G. & C. Merriam of Springfield, Mass., bought the unsold edition and publisher's rights, and after working over the material, in 1847 published the old Webster's Unabridged Dictionary. G. & C. Merriam have, from time to time, brought out better dictionaries, their latest being the Webster International.

In 1889 the copyright expired on the 1847 edition of Webster's Unabridged Dictionary and the next year there were many photographic reprints of the old book published and placed on the market by competitive publishers at very low prices. Hundreds of thousands of copies of these books were sold to buyers who wanted a cheap dictionary and may not have realized that their money was being spent for a reference book forty-three years old.

When these reprints appeared in 1890 The G. & C. Merriam Company combatted their sale and made claim to the exclusive right to the name, Webster, as a "trade-mark and trade-name." The courts, however, decided against them and held that when a copyright had expired, neither the book nor the title of it, belongs exclusively to the ones who have previously held copyright.

In 1894, Mr. Geo. W. Ogilvie, a publisher of Chicago, began work on a dictionary. He took the Noah Webster dictionary, upon which the copyright expired in 1889, and, using it as a basis, added ten years painstaking effort in producing an up-to-date work. The task was a large one. The first seven years were given to research; the next two years to securing proper co-workers, and during the last year,

1903-1904, he employed more than one hundred college professors, specialists. educators. and other able men and women on editorial work. Indicating the care exercised in its production, proofs for the volume were read thirty-four times. After the plates were made and the work was ready for the press, plate proofs were read six times more, with the result that 3,280 patches were made, and this one fact alone tells those readers familiar with printing that Mr. Ogilvie was desirous of having as reliable a reference book and print it from as perfect a set of plates as possible. When his ten years' labor was done. he found that about sixty per cent of the book was entirely new material.

In 1894, Webster's Dictionary, Imperial as Mr. Ogilvie called his book, was put on the market. It proved to be a handsome, upto-date volume, complete in every detail, and attracted immediate attention. But, the

work not only commanded attention; it also invited the fierce opposition of rival publishers. The character and quality of the work made it a formidable competitor for the better class of patronage.

Its right to the use of the name, Webster, was attacked in the courts. Instead, however, of preventing the Ogilvie publication to use the name of Webster, the other firms were enjoined from making claim to any "exclusive" right to the name Webster as applied to dictionaries of the English language, as the same has now become common property.

Mr. Ogilvie made a splendid fight for his rights and has succeeded in establishing the exact status of the name "Webster" in connection with the publication of dictionaries in this country. It simply remains now for the public to decide who produces the better book. Merit alone ought to determine.

TEACHERS' SALARIES.

Moline, Ill. The school board has adopted a new schedule of salaries for the teachers: First year, \$360; second year, \$390; third year, \$420; fourth year, \$450; fifth year, \$495.

Teachers' Exams.

"The Right Man in the Right Place"

If you believe this principle as important in the educational world as in business or technical work, you will want to know more of the methods of our Professional Department. We are prepared to supply experienced men for all kinds of educational positions. Our investigation of the ability and experience of every applicant is so thorough that bonds for him can be furnished if desired. This fact, together with our national organization and the concise, business-like manner in which records of candidates are submitted, makes our service appeal strongly to every progressive educator.

A single trial will convince you that our methods are superior to those of any teachers' agency. Write our nearest office to-day stating requirements of positions you have to offer and let us submit records of men well qualified for the places. Our lists include the most capable Superintendents, Principals, College Professors and Instructors, Department Teachers, Supervisors, Physical Directors and Specialists in every line at salaries ranging from \$600-\$5000 a year. Write us to-day.

HAPGOODS

The National Organization of Brain Brokers

Suite 144, 305 Broadway, New York
1015 Hartford Bldg., Chicago, Ill.
430 Chemical Bldg., St. Louis, Mo.
530 Williamson Bldg., Cleveland, O.
1215 Commonwealth Trust Bldg., Philadelphia, Pa.
1130 Park Bldg., Pittsburg, Pa.
311-313 Nicolett Ave., Minneapolis, Minn.
566 Wells Bldg., Milwaukee, Wis.
352 Endicott Bldg., St. Paul, Minn.
623 R. A. Long Bldg., Kansas City, Mo.
1028 Schmulbach Bldg., Wheeling, W. Va.

(Other Offices in Other Cities,)

"Teachers who are receiving the salary of the fifth year of service may become entitled to an increase of \$2.50 per month above this salary by attending the summer session of some approved college or university and earning credits for not less than twelve hours per week for a term of six weeks; and they may become entitled to a second increase of \$2.50 per month two years later by earning credits for twelve hours' additional work as provided

"Teachers advanced to the first or eighth grade shall receive \$5 per month more than they would now receive if assigned to one of the other grades. Sixty dollars per month shall be considered the maximum salary in the grades below the high school, except in the first and eighth grades. Sixty-five dollars per month shall be considered the maximum in the first and eighth grades."

AMERICAN PORTABLE HOUSE CO.

Manufacturers of

Portable Houses of all descriptions termanent Homes, Summer Residences Camps, Bunk-Houses, Churches, etc.



School House

We make a specialty of Portable School Buildings. Now in use in nearly all sections of the United States. Our Patent Construction insures a building that is absolutely dry, warm, well ventilated and healthy. Correspondence solicited. Write for catalogue, plans and prices to

Office, Room 335 Arcade Bldg., Seattle, Wash.

e several ough the s it was

cts

er-

ite

a

ial

of

B-

e instanvertical his comions are raft, but be fickle l, of the be prodistinct

. N. C. t school nce 1876. ed E. L se as his

OK

IED

ZO se of a

N

0 Cts. npany

keley, Cal.

THE NEW DAVENPORT HIGH SCHOOL

The new high school, opened last February in Davenport, Iowa, may be presented as an example of the highest type of modern high school architecture in the United States. It offers for sixteen hundred students ample accommodations for pursuing their studies to the best advantage, so far as surroundings and equipment can conduce.

The building is practically square and covers a ground area of 202 by 204 feet. The exterior follows the renaissance style with pleasing effect. Pressed brick, with raindrop stone trimmings and tile roof are the materials employed.

A tour of the building—even on paper—is interesting. Entering the main entrance, up the marble stairs of the vestibule, the visitor reaches the main corridor. The marble pilasters, the smooth marble terrazo flooring and the marble wainscoting give an air of solidarity and dignity that is noticeable throughout.

Turning to the right and descending the stairway into the basement, the visitor reaches the gymnasium which occupies practically the whole north side of the building. It is flanked on either end with a locker room and shower baths. On the opposite side is the manual training department fitted with twenty benches for wood-working and fifteen lathes. The motive power is electrical, with no overhead shafting. A special entry is provided for grade school pupils, who will at times make use of this department.

In the center of the basement is the heating plant. Ventilation is accomplished by means of a large blower. A system of heat regulation is installed by which the temperature is controlled automatically without reducing the amount of ventilation.

Returning to the first floor, one finds it typical of the floors above. To the left of the main entrance is the office of the principal, including a vault and a private room. The master clock of the program signal clock system and the exchange of the intercommunicating telephone system are to be found here.

On the south side is the first of the two study halls with seats and desks for four hundred students. Fifteen roomy recitation rooms are also on this floor as well as retiring rooms for the men and women instructors, a hospital and a students' society room. The latter is fitted with sixty-three opera chairs and will be used by the debating clubs and other organizations.

Occupying the central portion of the building and lighted on either side by wide, long courts is the auditorium. The seating capacity is 1,250 persons. There are five exits from the main floor, each leading to one of the three main exits of the building. The balcony is on a level with the second floor and has two exits. The stage is fitted with a drop curtain and is of ample size for lectures and class plays.

In general arrangement, the second floor is identical with the first. A library with connected reading rooms occupies the center of the east front and the commercial department the corresponding space of the west front. The long study hall and fifteen class rooms complete the floor.

The third floor and its series of laboratories and special rooms will interest the visitor more than the prosaic class rooms below. Two large rooms are devoted to physics, three to chemistry, three to biology and one to geology. In each there is a complete equipment for individual work.

The domestic science room has individual gas stoves, shelves and drawers for each girl. Two full dining room services occupy one side of the room with tables, sideboards, etc. The drawing rooms are on the north side where steady light may be had at all times. The lunch room and two rest rooms complete the floor.

Among other features of the building may be briefly enumerated: the stack system of toilet rooms, a freight elevator, fire hose, etc.

Messrs. F. C. Clausen and P. T. Burrows were the architects. Superintendent Frank L. Smart, by whose courtesy we present the engravings, on pages 2, 3, and 4, presides over the school.

THE WEBER COSTELLO COMPANY.

The modern manufacturer knows that expedition in production and economy in manufacture will result in prompt delivery and the assurance of a minimum of cost. As a secret of success this is not unknown. It can be comprehended in one term, namely, system. A proper correlation of all departments, a perfect organization keeping the cogs of the wheels of industry properly in motion, and an ideal arrangement adapted to the product manufactured, will, alone, bring forth the desired effect. The Weber Costello Co., Chicago Heights, Illinois, manufacturers of globes, erasers, eraser cleaners, pencil sharpeners, Hyloplate blackboard, reversible blackboards, slated cloth, liquid slating, Alpha crayon, etc., etc., may be taken as an illustration of this truism.

The factory covers about 50,000 square feet of floor space, of

A Sweeping Victory for

ISAAC PITMAN SHORTHAND

SPEED with ACCURACY AGAIN TRIUMPHANT

At the great International Contest for Speed and Accuracy in shorthand writing, held at Boston, March 30, 1907, under the auspices of the Eastern Commercial Teachers' Association, Miss Nellie M. Wood (Isaac Pitman writer) carried off the Eagan International Cup, and Sidney H. Godfrey (Isaac Pitman writer) again won the Miner Gold Medal.

Percentage Table: Eagan Cup.

Open to all without restriction.

NAME		GROSS SPEED PER MINUTE	MATERIAL ERRORS	IMMATE- RIAL ERRORS	NET SPEED PER MINUTE	System
Nellie M. Wood		225	22	23	163	Isaac Pitman
C. P. Gehman -		235	28	19	158	Graham
Fred Irland	•	235	30	30	142	Graham
S. H. Godfrey -	-	165	24	7	123	Isaac Pitman
G. H. Welsh	-	150	17	22	116	Benn Pitman

Five other contestants entered but failed to qualify.

Percentage Table: MINER MEDAL. •
For writers of less than ten years' experience.

S. H. Godfrey	165	24	7	123	Isaac Pitman
S H Godfray's transavint	was the	nly one of	enfloier	t movit to	he wated for this trop

Send for a copy of *Pitman's Journal* for April, 1907, containing a full report of this contest, also for a copy of "Some Points." A postal will bring both.

ISAAC PITMAN & SONS, 31 Union Sq., New York

Publishers of "Isaac Pitman's Short Course in Shorthand," \$1.25. Exclusively adopted by the New York High Schools.

which one half is devoted to the manufacture of the Hyloplate blackboard. This is a wood pulp board, the raw material for which comes in large rolls direct from the wood pulp mills, and is immediately made into slabs. It is then put under heavy pressure, until it acquires the toughness and durability of paper car wheels. It is then thoroughly dried before being coated with slating. After the slating has been applied it is sent to the rubbing room where the fine writing surface is obtained. This process is continued until finally the slate reaches the stock room where it is made ready for shipment. The

(Concluded on Page 25.)

MANUALS

ZOOLOGY—WHITNEY & LUCAS. With special series of exercises for the projection lantern by TRACY W. HOLMES. This has been carefully worked out along the latest lines and not only has secured the CHICAGO ADOPTION, but is being used in many High Schools and Normals. Price 95 cents. By Mail, post paid, \$1.00.

We will, on application, make up special editions to fit the need of the smaller High Schools, charging a lower price for same. Sample exercise sent on request.

BRIEFER EDITION. A special edition for half year work containing 100 hours work not including field work, without the charts. Price 35 cents.

PROJECTION ZOOLOGY—being the special series of exercises written by Tracy W. Holmes, for our exercises in Zoology, bound separately. Price 25c PHYSIOGRAPHY—Ashley F. Foss. A book written for the aid of teachers handicapped by lack of apparatus and material. Price 25 cts. post paid

NOTE BOOKS

Note books for ENGLISH, CHEMISTRY, PHYSICS, BOTANY, ZOOLOGY, PHYSIOGRAPHY, and MATHEMATICS. The only series that has been carefully compiled for scientific work in these topics by men who are authorities on each subject.

For information and samples address

XEEVES STATIONERY COMPANY

543 West 63rd Street

CHICAGO



RECENT TE

Chicago, Ill. The published by Gir Peutchland, by I added to the listing in the second German.

Auburn, Me.
text book commit
'Gradatim," a lead for the fres
On the recomm
of schools Gunn
lic War" was a
schools of Troy,
Worcester, Ma

Worcester, Ma the list of supple Home Geograph; pany; Webster-Language, Gran ton, Mifflin & C ends, a first Gre pany.

Davenport, Is has been introd Superior, W the text book of adopted the Nat Peterson & Co.,

Perry, Ia.
been adopted
readers, Ginn &
the United S
smith's arithm
physiologies, I
Music series,
drawing system
Detroit, Mice

readopted.
Steubenville,
the supervisor
the Melodic m

Ginn & Co.
of Hale & Bue
Mentzer & Gro
Book, the gran
Latin series to
Illinois. To
duced in the
sembly after

school author

against the pr

ATTE

The pictures

The from ra

attractiv Tead

17 B



RECENT TEXT BOOK ADOPTIONS.

Chicago, Ill. Thiergen's Am Deutchen Herde, published by Ginn & Co., and Wilkommen in leutchland, by D. C. Heath & Co., have been added to the list of books authorized for reading in the second year of high school course in Gorman.

Auburn, Me. On recommendation of the text book committee it was voted that Scudder's 'Gradatim," a German text book, should be used for the freshman class at the high school. On the recommendation of the superintendent of schools Gunnison & Harley's "Caesar's Gallic War" was adopted for use in the high schools of Troy, N. Y.

worcester, Mass. The board has placed on the list of supplementary text books: Fairbanks' Home Geography, Educational Publishing Company; Webster-Cooley Two Book Course in Language, Grammar and Composition, Houghton, Mifflin & Co.; Colson's Stories and Legends, a first Greek reader, The Macmillan Company.

Davenport, Ia. The Silver Song Collection has been introduced in the high school.

Superior, Wis. Upon recommendation of the text book committee the school board has adopted the National Speller, published by Row, Peterson & Co., and Miner's Commercial Arithretic.

Perry, Ia. The following text books have been adopted by the county board: Jones' readers, Ginn & Co.; Mace's School History of the United States, Rand, McNally & Co.; Smith's arithmetics, Ginn & Co.; Overton's physiologies, Buehler's grammars, Progressive Music series, Progressive spellers, Augsburg's drawing system, Economy writing books.

Detroit, Mich. Milne's arithmetic has been readopted.

Steubenville, O. Upon recommendation of the supervisor of music the board has adopted the Melodic music reader of the Natural Music course.

Ginn & Co. have sold the publishing rights of Hale & Buck's Latin grammar to Atkinson, Mentzer & Grover. With Dr. Hale's First Latin Book, the grammar forms the nucleus of a new Latin series to be published.

Illinois. The uniform text book bill introduced in the legislature was killed in the assembly after being favorably reported. The school authorities of the whole state were against the proposed measure.

The Montana State Text Book Commission will receive bids for school books for that state on June 17. The contracts will begin Sept. 1, and will run five years.

Exercises in Zoology
—published by Neeves
Stationery Co., 543 W.
63d street, Chicago,
has been adopted by
the State Normal
School, Two Rivers,
Wis.; Oshkosh High
School, Oshkosh, Wis.
and by the Chicago
Board of Education.

Kansas State Adoptions.

The state text book commission of Kansas has awarded contracts for supplying books to the public schools of the sunflower state for five years. The commission only took two and one-half days in which to decide on the new books. The largest contracts went to Silver, Burdett & Co., Scott, Foresman & Co., D. Appleton & Co., and Charles Scribner's Sons. The American Company got Book away with but one contract and that is not a large one. Charles Scribner's

Sons received more separate contracts than any other company. It secured the contract for geographies, which will amount to \$108,000, civil government, \$20,000, and elementary algebra, \$10,000. The total value of all the contracts is estimated at \$650,000.

Following are the successful publishers, their books and the amount of their respective contracts:

Speller—Rathbun's Graded Speller and Orthography, George D. Rathbun, Ottawa, Kan., \$30,000.

Readers—Powers & Balliet, series 1 to 5, Silver, Burdett & Co., \$150,000.

Arithmetic—Myers & Brooks Elementary and Advanced, Scott, Foresman & Co., \$120,-

BOOKS THAT STAND

THE TEST

THE SMITH ARITHMETICS

Used in such representative places as New York City, Philadelphia, Springfield,

and Worcester, Mass., Duluth, Minn., Des Moines (W. S.), and Dubuque, Iowa.

THE JONES READERS

Adopted for use in the schools of Chicago, Columbus, New York City, Des

Moines, Providence, R. I., Worcester, Mass., New Haven and Hartford, Conn., and many other important cities.

GINN & COMPANY, Publishers

Boston San Francisco

New York Atlanta Chicago Dallas London Columbus

Mental Arithmetic — Wentworth's, Ginn & Co., \$5,000.

Geography—King's Primary and Grammar School, Charles Scribner's Sons, \$108,000.

Grammar — Hoenshel's Complete English Grammar, American Book Company; Scott-Southworth's Lessons in English, book 1, Benjamin H. Sanborn & Co., \$60,000.

Physiology—Graded Lessons in Physiology and Hygiene — Krohn, D. Appleton & Co., \$24,000.

United States History — Davidson, Scott, Foresman & Co., \$36,000.

Civil Government—Our Government, James & Sanford, Charles Scribner's Sons, \$20,000.

Physical Geography—Introductory Physical

(Concluded on Page 31.)

ATTRACTIVE

INTERESTING

PRACTICAL

Eadie's Physiology and Hygiene for Children

The most attractive school-book of the century. The best illustrations ever seen in a text-book. Many colored pictures are used to differentiate the parts of the body.

Written in the language of a child of the fourth grade. Teaches functions of organs, not a long list of technical terms.

The text which meets the requirements of the law as to tobacco and alcoholic liquors consists largely of letters from railroad presidents and superintendents, Courtney and other college trainers and athletes, Arctic explorers, army officers, physicians, etc. These make this instruction personal and practical, and at the same time the most attractive part of the book.

Teachers who contemplate a change in their text-book on this subject should write us at once for sample pages.

Cloth, 204 Pages

List Price, 45c.

UNIVERSITY PUBLISHING COMPANY, 27-29 West Twenty-third Street, New York City

curacy , under ociation, e Eagan Pitman

man lan

nis trophy

V York

blackboard large rolls abs. It is durability oated with

ntil finally

nent. Th

es for efully

of the e sent

ents.
ten by
ce 25c
id of
t paid

ANY, s that to are

4G0

The Best TONIC

For the restoration of energy and vitality; the relief of mental and nervous exhaustion, impaired digestion or appetite, there is no remedy so beneficial as

HORSFORD'S Acid Phosphate

It is a scientific and carefully prepared preparation of the phosphates that provides the tonic and nerve food needed to improve the general health.

If your druggist can't supply you, send 25 cents to RUMFORD CHIMICAL WORKS, Providence, R. I., for sample bottle, postage paid.

The First Man Nowadays.

Teacher-Who was the first man?

Head Scholar-Washington. He was first in war, first in-

Teacher-No, no; Adam was the first man. Head Scholar-Oh, if you're talking about foreigners, I s'pose he was!

It is I.

A teacher of Philadelphia recently had a rather unexpected result from her effort to teach a boy to say "It is I." After the correct form had been given him, the teacher said, "Now, John, what must you say?" Her astonishment may be imagined when the ready response came, "You're it."



Insulted.

Contractor-Did you offer that school director \$500 as I directed?

Secretary-Yes, sir.

"How did he act?"

"He looked insulted."

"What did he say?"

"He said I ought to be in the penitentiary."

"What did he do?"

"He took the money."

Gin nenes Thier.

Lehrer: "Nenne mir mal ein nügliches Injekt, Karlchen."

Rarlden: "Die Bie-

Lehrer: "Sehr gut. nd Du, Frischen, Und fannst Du mir ebenfalls eins nennen?"

Fritchen: "Die Nothbremje, Berr Lehrer!"



AVE YOU BEEN PERFECTLY SATIS. AVE YOU BEEN PERFECTLY SATIS. FIED with the lead pencils used in your schools during the past term? If there has been something that was not just right, and by any chance you are not acquainted with DIXON'S AMERICAN GRAPHITE PENCILS, allow us to be the means of bringing about an introduction. A COUN

The southern

classic styles of

them with plea

Messrs. Adams

the custom of t

of the Central

on page 14, and

structure of the

stone and stuce

used in the corr

the front entra

A study of

manual trainin

have been grou

woodworking r

located in the

molding rooms

laboratories ar

rooms are con

noted that ea

which will be

windows on tw

The main en into a large re

to entrances

will be steps

The first flo

50x56 feet, in

locker and a

light well, w

ground floor,

study hall. I

the light wel

main corridor

floor, extendi

The steps to

end of the co

two classroon

ception room

lockers, and

main corrid

teachers' room

The light w

the main cor

over the ligh

will be \$40,0

WEBSTER'

During th

Lee, who w

pocket Engl

issued more

three years

of English

The cost

The second ment to the

In the from

all times.

The exterior

Send us 16c. in stamps, and we will do our part by sending a good, generous, liberal package that will give you an excellent idea of the good things in store for those who use the

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

Easily Accounted For.

At a reception recently given in an eastern city a young man was introduced to a handsome young woman and lost no time in trying to create a favorable impression.

"Miss Smith," he gushingly said, "do you know that although I have just met you there seems to be a sympathetic tie between us.

"Is that so?" interjected the lady, a little

"Yes," continued the dudeful one; "you seem to know just how to appeal to my tastes and exercise an influence over my mind that commands me to obey. I judged at once that you were a literary woman and-

"Oh, no," broke in the lady, joltfully, "I am a kindergarten teacher."

She Couldn't Draw It.

A school teacher one day, during the hour for drawing, suggested to her pupils that each draw what he or she would like to be when

At the end of the lesson one little girl showed an empty slate.

"Why," said the teacher, "isn't there anything you would like to be when you grow up?" "Yes," said the little girl. "I would like to be married, but I don't know how to draw it."

He Knew.

-Life.

One morning, during the geography lesson, the teacher was explaining the movement of the earth around the sun and of the moon around the earth. Up in the western sky was the moon, large, and exceedingly pale.

"Look, children; there is the moon! Do you

One little fellow, usually most interested in everything new and novel, paid no attention.

"Tommy!" said the teacher, rather impatiently, "Why don't you look also?"

"What's the use? The moon ain't lighted in the daytime, anyhow."

Probably Correct.

The teacher had asked the meaning of the word orphan, but none of the children had re-"Well," she said, finally, "I am an orphan. Now, can anyone tell me?"

"Please, ma'am," said a little follow, "an orphan is a lady that wants to get married, but

Wet His Feet.

Teacher (in colored school)—Moses, give me a sentence with the words debasement and de-

Scholar-My old man fell in de basement and wet de feet.



First Teacher—Is your new principal all you thought him to be?

Second Teacher-O yes; but I'm sorry to say that he is much less than he thinks himself

Like Other Mothers.

"And now, children," remarked the teacher when this point in the narrative had been reached, "can any of you tell me what Moses' mother did with him when he grew a little older?

"I know, Miss Mary," said a lad named Willie, after an unbroken silence of nearly

"Well, Willie," responded the teacher encouragingly, "what did she do with him?"
"Put him in pants," was the startling re

joinder of Willie.

Satis Verborum.

"But I have talked long enough," said the windy school board orator, looking at his watch "Keep on," shouted a disgusted fellow mem ber. "You'll say something after a while!"

Familiar Example.

Teacher (of class in elocution)-What is a rhetorical pause?

Shaggy Haired Pupil-It's when an orator makes a little stop and waits for the applause

Pleasant June Days.

Sunday School Teacher-Do you know where little boys go who go swimming on Sunday! Kid-Sure, but you can bet I ain't going to give the snap away.

Before and After Graduation.

"School days at last are ended!" Sang the graduating class. With young voices sweetly blended In the singing-but alas! They will know, with age and reason, As they view life's setting sun, That this glad, ecstatic season Was their schooling just begun.

SCHOOL Officials or Teachers who contemplate changes should see the new SCOTT-SOUTHWORTH LESSONS IN ENGLISH and the SOUTHWORTH-STONE ARITHMETICS. Both series have been more generally introduced in the Schools, within the same limited time, than any other like text-books published in this country.

CORRESPONDENCE SOLICITED

BENJ. H. SANBORN & CO.

BOSTON

NEW YORK

CHICAGO

Judson and Bender's GRADED LITERATURE READERS. Reed and Kellogg's LESSONS IN ENGLISH. Hutchinson's PHYSIOLOGIES. Peter's MODERN CHEMISTRY

CO., Publisher

A COUNTY HIGH SCHOOL.

SATIS.

in your here has t right, luainted APHITE

eans of

l do our

give you use the

N. J.

oal all you

erry to say

ks himself

he teacher

had been

hat Moses

w a little

amed Wil-

nearly a

er encour

irtling re-

' said the

his watch

llow mem-

while!"

What is a

an orator

applause

now where

unday!

son.

EMISTRY

Publisher

The southern architect delights in the old classic styles of architecture and will employ them with pleasing effect whenever possible. Messrs. Adams & Alsup have not departed from the custom of their brethren in the designing of the Central county high school, illustrated on page 14, and have produced a purely classic structure of the Tuscan order.

The exterior will be constructed of buff brick. stone and stucco. The latter material will be used in the cornices and in the colonnade above the front entrance.

A study of the plans will disclose that the manual training departments of the school have been grouped on the ground floor. The woodworking room and the machine shop are leated in the rear extension; the cooking and molding rooms are on the sides and the two laboratories are placed in the front. Toilet rooms are conveniently placed. It will be noted that each of the rooms on this floor which will be used for class purposes have windows on two sides, insuring ample light at all times.

The main entrance to the building will open into a large rotunda with a corridor extending to entrances on either side. At the rotunda will be steps leading to the first floor.

The first floor will contain a large study hall, 50x56 feet, in the rear of the building, with a locker and a classroom on either side. The light well, which is over the rotunda of the ground floor, will be directly in front of the study hall. Extending in a half circle around the light well and to either side will be the main corridor, similar to the one on the ground floor, extending the length of the building. The steps to the second floor will be at either end of the corridor.

In the front of the building will be located two classrooms, a library, a teachers' room, reception room and office.

The second floor will be similar in arrangement to the first floor, with a study hall, two lockers, and two classrooms in the rear of the main corridor, and four classrooms and a tachers' room in the front part of the building. The light well will likewise furnish light for the main corridor. In the roof of the building over the light well will be a skylight.

The cost of the structure, when completed, will be \$40,000, including furnishings.

WEBSTER'S NEW STANDARD DICTION-ARIES.

During the past decade and a half Laird & Lee, who were the pioneer publishers of vest pocket English and foreign dictionaries, have issued more than fifteen dictionaries. About three years ago they began publishing a series of English lexicons known as Webster's New

Standard Dictionaries for school and general use. The first two volumes of this series were the "Library and High School and Collegiate Editions." These were rapidly followed by the "Stuents' Common School Edition;" the "Intermediate School Edition," and the firm now announces the "Elementary School Edition," making in all five excellent volumes.

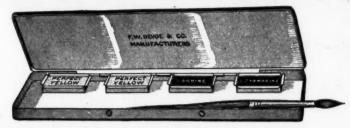
These dictionaries are well graded to meet the needs of the various classes indicated by the names of the books, from primary department to college and when published attracted immediate attention in educational circles.

They were compared carefully with other school dictionaries by various School Boards, who adopted them without further solicitation.

In competition with other dictionaries they were awarded gold medals at the St. Louis and Portland expositions. For these different editions the publishers claim more pages, more illustrations, more original and special features than are found in any other school lexicens, and all at a considerably lower price. They are thoroughly up to date, containing as they do full page and colored plates and hundreds of text engravings, hundreds of new words, degrees of adjectives, plurals of nouns, irregular forms of verbs and at the foot of each page a key to the diacritical markings.

These books are uniformly bound in black silk cloth and the gold stamping and special patented design give them an individuality which is separate and distinct from any other on the market.

The "Elementary School Edition" is reviewed in another column of this issue and we refer the reader to the firm's announce-



YOU may think the name on a box of school water-colors doesn't matter very much. Your'e mistaken; and your first experience with Devoe quality will prove it.

We are the oldest and largest makers of colors and brushes in the United States; and we know how to do it right.

We show here our "New Series" No. 122C: Three Colors: Carmine Ultramarine Blue, 2 cakes Perfect Yellow; one long handled No. 7 brush in enameled tin box 2x8 inches: 30c each. In place of extra cake of Perfect Yellow we can furnish Black or Charcoal Gray. Send for catalogue showing many other sizes and styles. Address Dept. 5.

Special discounts to schools, teachers and dealers.

DEVOE

176 Randolph Street, Chicago
Fulton & William Streets, New York
1214 Grand Avenue, Kansas City

ment. Messrs. Laird & Lee will take pleasure in submitting detailed information in regard to this excellent series of school lexicons.

The publishers wish to announce that while based upon the original system of Noah Webster, "Webster's New Standard Dictionaries" are original productions and not reprints or copies of any other dictionaries. Every line of type in these lexicons has been set by hand in the composing room of the publishers, and the various editions are covered by over thirty different copyrights. They represent an expenditure of thousands of dollars, and the firm is to be commended for being a pioneer in extensive publication of dictionaries west of New York.



If interested in Class Pins, write to us. We will make for you, free of charge, special and original designs executed in colors. Be sure to let us know what your class colors are, and about how many pins you can use; we will then quote you our lowest net figures.

We do first-class work only, but at very reasonable prices.

Bunde & Upmeyer Co., Jewelers, 71.75 Wisconsin Street, MILWAUKEE WIS.



Overhaul Your Text, Library and Supplementary Books

Put Them in Durable Condition for Use Next Fall

Owing to a 30 per cent. increase in our business over same period one year ago, as well as the tremendous accumulation of orders during July, August and September, we advocate and urge early orders of the

HOLDEN BOOK COVERS
PERFECT SELF BINDERS
"T" BINDERS
TRANSPARENT PAPER

We are the Originators, Designers and Inventors of Practical, Valuable Articles for Rebinding and Repairing Books

We Have What You Need and We Know It!

HOLDEN PATENT BOOK COVER CO.

G. W. HOLDEN, Pres't.

SPRINGFIELD, MASS.

M. C. HOLDEN, Sec'y.

THE BEST PENCILS AND STEEL PENS FOR SCHOOL USE

-ARE-

"EAGLE"

If you want to try them send 16 cents in stamps for samples worth double.

Try our No. 314 DRAUGHTING and No. 284 INSPECTOR EVERY TEACHER PRAISES THEM

EAGLE PENCIL CO.

377-379 Broadway Mention this publication.

NEW YORK

CRADUATION.

That the school boards can require high school students to write and deliver an essay or oration before receiving their diplomas, is the ruling of State Superintendent J. W. Olsen

The ruling was made recently in reply to a query from the school board at Appleton, Minn. Four of the seniors at the high school there had refused to write orations required by the school superintendent and the board desired to know if they had any legal right to refuse them diplomas if they did not write the ora-The pupils contended that they could enter the university without taking this part of the high school course, and, that therefore, the school board had no right to impose the orations upon them.

Superintendent Olsen in reply says: "Your school board, unquestionably, has the right to require that the writing and delivering of a senior essay or oration shall be a part of the four years' course in English, required for graduation from your high school. superintendent, acting under authority and with approval of the board, may require that a student shall have fully complied with this rule before he submits the student's name to the board for graduation. The board has a right to withdraw a diploma from a student failing to comply with this requirement, as the rule is reasonable and fair."

HAPGOODS PLACING TEACHERS. Well Known National Organization of Brain Brokers Enters Educational Field.

The announcement that Hapgoods, the well known National Organization of Brain Brokers, has entered the educational field and is now filling all sorts of positions requiring male teachers, is creating much interest among both teachers and their employers. Heretofore Hapgoods has confined its efforts exclusively to business and technical men and has acquired the reputation of being the best means of securing competent, trustworthy men for positions of responsibility. Now it spreads out into educational work, applying to the problem of filling teaching positions the same system that has proved so effective in other lines.

Hapgoods was founded in 1902 and has grown rapidly, having at present 12 offices in the United States and one in London, Eng. Its employees number over 350 and ninety-five per cent of them are college-bred men. The founder and president of this unique organization, H. J. Hapgood, is himself a young man and a graduate of Dartmouth College. Mr. Hapgood is widely known for his numerous magazine articles and lectures on various phases of the

Why Is It?

That Penmanship is so poorly taught? Because teachers are not properly prepared. There is but ONE work that will do it. Send \$1.50 for that and you can stop the trouble. Boards and Agents liberally treated. Order "ILLUSTRATED LESSONS and LECTURES on THEORY and ART of PENMANSHIP." (280 pp. Royal Octave, 1000 cuts.)

Address, THE ELLSWORTH COMPANY, 127 Duane St., N. Y.

employment problem.

"The Professional Department of Hapgoods," said Mr. Hapgood in a recent interview, "will take up the placing of teachers along lines radically different from the teachers' agencies. In fact our methods are so different that we are not going to call ourselves a teachers' ageney. Our thorough investigation of the records of candidates, the national scope of our organization, and the active, aggressive work which we guarantee to every client commend our methods to all progressive educators. For the present we shall confine ourselves largely to supplying posi-

tions for men, but later on our work will be broadened to cover positions which can be filled by women.'

Experienced men have been secured to take charge of the new Professional Department, which by the way is already in successful operation and filling many positions in all sections of the country. In Chicago the manager is C. A. Donnelly, for some time assistant superintendent of public instruction in Wisconsin and more recently representative for Ginn & Company in that state. In the New York office the manager is H. D. Sanford, a graduate of Syracuse University and formerly on the faculty of the Peekskill Military Academy, and men of equal experience are in charge in the other offices, which include Pittsburg, Philadelphia, St. Louis, Minneapolis, Cleveland, Milwaukee, St. Paul, Wheeling, Kansas City, etc.

SUPPLIES AND FURNITURE.

The Board of Education has taken possession of the new high school building just completed at Cambridge, Ill. It is thoroughly modern and is provided with the Improved Artificial Slate Blackboard put on by M. H. E. Beckley, Chicago; the building is well lighted and is equipped with the Burlington Venetian Blinds.

A new series of independent desks and chairs for classroom use has been placed on the market by the Steel Furniture Company of Grand

Rapids, Mich. A distinguishing feature of the new desks are the steel standards which replace the heavy iron castings generally used. Especial care has been taken by the man-

JUDSON T. WEBB. President

L. T. KUEHL, Secy. and Treas.

THE WEBB POTTERY CO.

3147-3151 COTTAGE GROVE AVE. CHICAGO, ILL.

WEBB POTTERY WARE POTTERS' MOULDS POTTERY DRAWING MODELS KILNS FOR EDUCATIONAL INSTITUTIONS

KILNS FOR EXPERIMENTAL WORK

MODELING CLAY HIGH-GRADE POTTERS' CLAY POTTERY GLAZES POTTERS' WHEELS AND TOOLS KILN LININGS AND CASTINGS

Summer Classes in Pottery Work.

Dear Sir or Madam:-

Believing that you appreciate the value of any handwork which may be done in school, I think you will be interested in the course of instruction in Pottery which is to be given by "The Webb Pottery Co." the coming summer.

There will be three terms, the first being June 24 to July 17, the second July 18 to August 9, and the third August 12 to September 5.

There will be three terms, the first being June 24 to July 17, the second July 18 to August 9, and the third August 12 to September 5.

Each term will include twenty lessons of three hours each. Instruction will be given in hand-made and mould pieces, also in thrown work and mould making. Attention will be given to various forms of decoration including relief modeling, inlaying, inclining and underglaze painting.

About fifteen problems covering the work as it would be done in the schools, will be worked out in a term.

The tuition will be twenty dollars and will include all materials required and the glazing and firing of one piece illustrating each problem worked out.

Mr. J. T. Webb, as you know, had charge of the work in pottery at The Art Institute for several years and is recognized as an artist of great ability and a practical potter.

He will have charge of the classes and will be assisted by other competent instructors and the classes will not exceed twelve pupils.

Any further information that you may desire will be cheerfully given.

Yours truly.

The Webb Pottery Company.

Webb's Manual of Clay Work and Pottery Firing and Catalogue of Pottery Supplies sent on request.

> ufacturers to make the desks and chairs according to the latest investigations for hygienic

> Crane & Co. have started a suit in the District court at Topeka, Kas., to recover damages to the extent of \$6,500 from Lizzie E. Wooster for her failure to prepare manuscripts for them for readers.

Allegations are made that the book publishers went into a contract with Miss Wooster whereby she was to furnish them with manuscript for first, second and third readers. The company claims that \$3,500 was expended for materials to print the books and that it was impossible to use these supplies because Miss Wooster did not furnish the manuscript. For this reason the company was unable to have the books ready to offer to the state text book commission for their adoption in the schools of

The company claims further that it had to employ another author to get up these books and that this was done at an extra expense of \$3,000.



SENTENCE METHOD

BARNES TEXT WASHINGTON, D. C. Business High School. Worthy of general use-Milne

COMPLETE TYPEWRITING DICTATION COURSE

THE ARTHUR J. BARNES PUB. CO., ST. LOUIS, MO.

WI

factory is equ lion square : known the we mon use in e ticularly val twelve foot where withou The globe

sections, tha from the rou and the cas castings are plating. Bo globe balls assembling are set up These globes schools, pub nartments of

business wh Costello Co erasers by tl wooden bloc the cars, to all is bustle erasers are ing the can

The eraser

The gene first floor, v stored. Ex handling a Special arr the Chicag sure promp ments. Up to t

Company done last convenienc partment. within two factory.

> The pla page 6), t prepared The struc

Te

state of V The bu struction, a commo which ma affording and doing arranged

ing depar

use of the



PLANT OF THE WEBER COSTELLO CO., CHICAGO HEIGHTS. ILL.

WEBER COSTELLO CO.

(Concluded from Page 20.)

factory is equipped to turn out over two million square feet per annum. This board is known the world over and has come into common use in equiping school rooms. It is particularly valuable, in that it can be had in twelve foot lengths and can be shipped anywhere without breakage.

The globe department is divided into two sections, that wherein the ball itself is made from the rough stock and covered with maps, and the casting room where the rough iron castings are polished and turned into shape for plating. Both, castings when plated and the globe balls when dried, are forwarded to the assembling room, where the complete globes are set up and packed ready for shipment. These globes are now in use in thousands of schools, public libraries and government departments of the various countries.

The craser industry is no small section of the business when one remembers that the Weber Costello Company, manufactures blackboard erasers by the million. From the cutting of the wooden blocks, as the lumber is unloaded from the cars, to the trimming of the large felt rolls, all is bustle and work. One hundred gross of erasers are made ready each day, without taxing the capacity of the department.

The general shipping room is located on the first floor, where the stock of Alpha crayon is stored. Excellent facilities are provided for handling a large number of shipments each day. Special arrangements have been made with all the Chicago Heights railroads which will insure prompt delivery in forwarding all shipments.

Up to the present time the Weber Costello Company has doubled the amount of business done last year at this time. This has not inconvenienced the shipping or any other department. All orders are placed on the road within twenty-four hours after receipt in the factory

Tenth District School, Milwaukee.

The plans for the tenth district school (see page 6), to be erected at Milwaukee, Wis., were prepared by Architects Leenhouts & Guthric. The structure will be one of the finest in the state of Wisconsin.

The building, which will be of brick construction, will contain eighteen classrooms and a commodious assembly hall on the first floor, which may also be used for gymnasium purposes. It will be only two stories high, thus affording a large measure of safety to children and doing away with stair climbing to a minimum. Two rooms in the basement will be so arranged that they can be easily converted for use of the cooking school and the manual training departments. Ventilation will be by grav-

ity and at least thirty cubic feet of fresh air will be supplied a minute for each pupil. All toilet and washrooms will be in the basement and so walled off that there will be absolutely no communication be-The tween the sexes. approximate dimensions of the classrooms will be: Width, 23 feet; length, 33 feet; height, 12 or 13 feet. The glass area of the windows will be at least one-fifth of the floor area of the rooms which they are designed to light.

The total cost of the building will be \$68,-

THE WHITTIER SCHOOL.

(SEE PLANS PAGE 13.)

The Whittier school was designed by G. W. Ashby, 183 Jackson blyd., Chicago, and is being built at Harvey, Ill. It is a modern and up-to-date building and conforms with the latest ideas in schoolhouse construction. The building is constructed of mottled vitrified pressed brick laid in concave joints. The foundation is of stone and all the trimming of Bedford stone. The roof is of slate, the cornice of galvanized iron, and the gutter of copper. There is a basement under the entire building which has a nine-foot ceiling. It contains the manual training and domestic science rooms, storerooms, boys' and girls' toilet rooms, the boiler room and fresh air room. All the modern school buildings now contain manual training and domestic science rooms.

The first floor is divided into four classrooms and a main hall which is 50 by 27 feet in the clear outside of the stairs. This is used for exercises of various kinds and chairs can be placed in the entire hall, and this does away with the inconvenient feature of having people from 30 to 60 years old trying to sit in the seats designed especially for the children anywhere from 6 to 16 years of age. With a hall of this kind some comfort can be derived out of these entertainments.

The second floor is divided into four classrooms, a school board room which also contains a fireproof vault. Here the records of the school can be kept and also the proceedings of the school board.

THE EMERSON SCHOOL.

(Plans Page 14.)

The Pacific Coast architect must solve problems not met with in the eastern states. Cli-

THE NEW PRACTICAL REFER-ENCE LIBRARY



Over 3,000 pages, over 2,000 illustrations, over 20,000 subjects.

Durably and handsomely bound.

Prepared for school use by leading educators of the country.

Sold at a much lower price per volume than any other standard work of reference.

The best work of reference for students and progressive teachers because of its up-to-dateness; its convenience; its reasonable price; and because of the interesting manner in which subjects are discussed.

The Practical Home and School Educator alone, will prove invaluable to the teacher and student. It is entirely unique. It enables the teacher to arouse the dullest pupil's interest; permits a course of effective study in any branch and furnishes just the material necessary for productive review work.

Sample pages and beautiful color plate FREE.

THE DIXON-HANSON CO. OORN St. CHICAGO, ILL.

315 Dearborn St.

mate and other conditions require changes in the construction, lighting and heating of school buildings. Thus the Emerson school planned by Archt. F. D. Vorhees and erected at Berkeley, Cal., embodies some features which are distinctly adapted for California.

The exterior is Italian Renaissance in style and the entire structure is built of wood to better withstand seismic disturbances. The basement contains separate toilet rooms for boys and girls, space for the heating and ventilating apparatus and large playrooms for boys and girls

The arrangement of the two main floors is exceedingly simple. Each classroom is 24 by 32 feet in size, lighted from one side and connected with a Boston cloak room. The office and teachers' room are centrally located on the first floor where they may be easily accessible to pupils and to other persons having business with the principal. The second floor contains six standard classrooms, two of which are connected by folding doors to permit use for exhibition purposes.

At the reorganization of the Board of Education, T. W. B. Everhart, formerly of Mason City, Illinois, was unanimously re-elected by acclamation and his salary fixed at \$2,000. A rew \$25,000 High School is now under construction, and so rapid is the growth of the city that the Board is also contemplating the erection of two additional ward schools.

Kenosha, Wisconsin, has another fine new school building now nearing completion. It will be fitted with the best natural slate blackboards furnished by M. H. E. Beckley, Chicago.

d Treas,

S' CLAY ZES .S ASTINGS

any

to 12

907.

re s, en layid be

in nized lsted

and

hygienic
the Diser damizzie E.
nuscripts

publish-

Wooster h manurs. The mded for t it was use Miss ipt. For to have ext book chools of

se books expense

t had to

N, D. C. School. use—Milme

TING
COURSE
S.......50c
.... FREE
Expert in
FREE

UIS, MO.



ALABAMA.

Montgomery — Methodist school will be erected. Girls'

ARIZONA

Tucson—School will be erected; \$47,000. Crystal Falls—School will be erected. Tempe—Bids will be received for two schools.

CALIFORNIA.

Palo Alto-\$50,000 has been appropriated for training school. San -8-room addition will be erected for Sherman school. Sacramento-School is being erected on 4th and Q streets. San Diego—Contract has been let for Sherman Heights school.

COLORADO. Fort Collins-Erection of 8-room school proposed; \$30,000. Denver—Archts. Robt. S. Roeschlaub & Sons have plans for science hall, Denver University; \$40,000.

CONNECTICUT.

Bristol—Archt. Theo. B. Peck, Waterbury, will submit sketches for addition to high school. East Haven—
4-room addition will be erected for
Union district. Shelton—Archts. Meloy & Beckwith have plans for new school. Stamford—Archt. Henry Mar-vin has plans for 8-room school. New Haven—Contract signed for school. New Britain—Contract was awarded for erection of Clark school.

DISTRICT OF COLUMBIA. Washington — Building will be erected for St. Thomas College, Cath-

olic University.

GEORGIA.

Atlanta-Bids will be received for erection of grammar school, Grant and Pavilion Sts.; E. C. Wachendorff,

ILLINOIS.

Tremont—\$3,000 school will be erected in Buckeye district. Mt. Carroll—Contract let for building for ville-Contract has been let for \$20,-000 school. Parkville—School will be erected; \$5,000. Evanston—4-story Swedish Theological Seminary will be erected. Lovington—4-room school will be erected; \$12,230. Decatur— Bids received for east side school.

Rockford—Plans will be drawn for

2-story Merrill school. Peoria— 2-story Merrill school. Peoria— Plans are being drawn for Lincoln Plans are being drawn for Lincoln avenue high school. Clyde—Archt. Geo. W. Ashby, Chicago, has plans for school; \$15,000. Rochelle—Archts. Spencer & Temple, Champaign, have plans for 6-room school; \$16,000. Hedgewisch—Figures will be received for creation of 2-story school. St for erection of 2-story school, St. Florian's church; \$25,000. Glencoe— Plans prepared for addition to school; Woodlawn-Bids will be received for erection of school. Havana —Contract has been awarded for erection of school. Breeds—Bids will be received for erection of school. Streator—Bids will be received for Grant school. Alton—Archts. L. Pfeiffenberger & Son have plans for addition to school.

INDIANA. Kouts—Archt. Chas. F. Lemke, Valparaiso, has plans for addition to school, Pleasant twp.; \$5,000. Newcastle—Archt. W. S. Kaufman, Richmond, has plans for school; \$25,000. Avilla—Addition will be built to school. Terre Haute—School will be creeted for St. Anne's church. Wingate—School will be built; \$30,000. Terhune—Archts. J. T. Johnson & Co., Indianapolis, are preparing plans for Archts. Campbell & Osterhage are preparing plans for 9-room school; \$30,000. Denver—Archt. Kindig, Rochester, has plans for 1-story school; \$3,500. Evansville—Addition will be built to manual training school. Mil-

roy-New school will be erected. Petersburg-\$35,000 school is contemplated. Mooresville-Archts. Herbert L. Bass & Co., Indianapolis, are pre-paring plans for 8-room school; \$25,-Whitestown-Archts. Hastings & Gardner, Indianapolis, have plans for 1-story school; \$5,000. Indianapolis—Archts. Daggett & Co. have plans for school, New York and Lin-

INDIAN TERRITORY.

Boynton—Archt. W. H. Blakely, Ft. Smith, Ark., has plans for a 4-room and a 2-room school; \$12,000. Indianapolis—Bids will be received for erection of two schools.

IOWA. Dubuque—Archt. Thos. T. Carkeek has plans for addition to Academy of Visitation; \$26,000. Delaware—School will be built. Indianola—School will be er ted. Patterson—School will be erected; \$6,000. be erected; \$6,000. Keokuk—Excavations begun for St. Mary's parochial school. Ames—Proposals will be received for remodeling Iowa State College, Proudfoot & Bird, Archts., Des Moines. Muscatine—Archt. A L. Branson has place for Archts., Des Moines. Muscatine—Archt. A. L. Branson has plans for school, Wapsie twp. Winfield—Archts. Hanssen & Harfst are preparing plans for school. Cedar Falls -Plans have been approved for State Normal school; \$175,000. Kellogg— School will be built in Joseph Miller School will be built in Joseph Miller district. Spring Hill—Bids will be received for erection of school. Cresco—Bids will be received for erection of school, Albion district. Fonda—Archt. J. G. Ralston has plans for \$30,000 school. Promise City—Bids will be received for erection of school. Humeston—Archt. O. A. Houghland has plans for school. New Vienna—\$20,000 school is contemplated. Red Oak—Bids will be received for erection of school. Merreceived for erection of school. Merryville-Bids will be opened for erec-

KANSAS.

Manhattan—State Archt. J. F. Stanton, Topeka, has plans for a domestic science building for Kansas Agri-cultural College; \$75,000. Also Veterinary Science Hall. Saline—Archt. W. E. Harris, Portsmouth Bldg., Kansas City, has plans for 3-story science hall, Kansas Wesleyan College. Coffeyville-Contemplate erection of Confeyville—Contemplate erection of First ward school and Fifth ward school; \$25,000. Colby—Archt. Carl Boller, New Nelson Bldg., Kansas City, has plans for 2-story high school; \$12,000. Ottawa—High school will be erected. Parsons—Colored school will be erected; \$30,000. Caney -Archt. Walter Everman, Bartlesville, Ind. T., has plans for school; \$20,000. Chanute—High school is \$20,000. Chanute—High school is contemplated; \$25,000. Also school to cost \$16,000. Yates Center—Contract was let for school, Hair & Smith, Archts., Iola. Topeka—Plans are being made for 4-room school. Baldwin—Archt. W. E. Brown, New Ridge Bldg., Kansas City, has plans for buildings for Baker University; \$70,000 to \$100,000.

KENTUCKY.

Louisville-Additions will be made to University of Louisville; \$50,000. Archt. D. X. Murphy & Brother have plans for school, 34th and Chestnut Sts.; \$50,000. Danville-New building will be erected for Woman's College; \$80,000. Owensboro-8-room school will be erected, corner Hickman and Grand avenues. Covington—Bids will be received for erection of school.

London—Bids will be received for erection of \$15,000 school.

LOUISIANA.

Slidell-Archt. Andrew J. Bryan. New Orleans, has plans for high school; \$20,000. Shubuta—New school will be erected. Baton Rougewill be erected on north side: \$19,000. Lake Charles—School will be erected. Natchitoches—2-story school and auditorium will be erected on St. Mary's academy lot. Shreveport—Archt. E. F. Glick has plans for 3-story, \$30,-000 building for Centenary College.

LEWIS & KITCHEN Heating and Ventilating Engineers

CHICAGO-KANSAS CITY

MANUFACTURERS OF MODERN APPARATUS DRY AND FLUSHING CLOSETS

SEPTIC TANKS

GARBAGE CREMATORIES

433 Wabash Ave. CHICAGO

Ninth and Broadway KANSAS CITY

New Orleans-School will be erected at Clouet and Villere Sts. Jennings —\$40,000 school will be erected. New Orleans-Plans have been completed school, Foucher, Amelia, Barome and Dryade streets.

MAINE.

Eden—Archt. Fred. L. Savage, Bar Harbor, has plans for high school; \$60,000. Mexico-Contract was let for Belgrade-Contract has been let for Franklin school. Rumford Falls-Contract has been let for high school.

MASSACHUSETTS

Boston—Archt. R. C. Sturgis has plans for trade school for trustees of Franklin fund; \$250,000. Carlisle Warren L. Floyd, Lowell.

has plans for 4-room school: \$10.00 Worcester—Addition will be built a school on Southbridge St.; \$22,000 Lawrence—Archt. John Ashton haplans for 16-room grammar school South Lawrence; \$77,000. Northbol —Archt. Robt. A. Cook, Milford, designing a 2-story school. New Bel-ford—Archt. Samuel C. Hunt ha plans for 12-room school for south west district. Archt. N. C. Smith ha plans for 8-room school on Spoor lot. Revere—Archt. Edward I. Wilson, Boston, will receive figures for erection of 3-story high school.

MICHIGAN.

Marion—Archt. T. Gaastra, Kenosha, Wis., has plans for 8-room school. Mt. Pleasant—New school

Architects Firectory

A. H. DYER CO. CHAS. L. LESSER

SCHOOL HOUSE ARCHITECTS

Complete details of modern construction.

Expert examinations and detailed reports of the condition of buildings a specialty.

Fremont, Nebraska.

School House Architect

331 GROVE STREET MILWAUKEE, WIS.

W. R. Parsons & Son Co. **ARCHITECTS**

DES MOINES, IA.

Publishers of Plans for Modern Twentieth Century School Buildings, **All Classes**

CORRESPONDENCE SOLICITED

LOGKE

Churchill 468 Carroll Ave

will be erected

Archt. H. T. Li Escanal on high schoo Osgood & Osg have plans for Fran congreg. eived for scho Hollister, Sagir school; \$10,000. begun on \$7,000 m school wil ward; also 4-restreet school. street school. Daverman, Gra Cheboygan-Con for high school. been co Rapid River-\$ templated. Me bert has plans school. Grand inson & Campa preparing plans school; Archts. Robinso Rapids, have I Berryvil ceived for erec MI

Fisher, St. story addition Sueur-Archt. 1 Blk. St., Paul. addition to Sis leth-Grade sch 000. Maple La Orff. Minneapo school; \$1 000 parochial Madison Lake-Henning-Orff, Minneapo room school; \$ tract has been \$45,000. Curr Deusen, Wind school and cor -Bids will be high school. 1 been let for Archt. E. A. 1 room parochia 000 school wil

Hector-Arch

M Winona-An Archts., Sardis remodeling sc P. J. Krouse 1

Springfield-

Elsner, St. I academic hall \$190,000. Mary Kansas City. Rosary school Campbell stre being prepar school. Mem Mem \$40,000 for e Edgewood-A St. Louis, has chool will be Carthage—Co prepared for Bids we of school, dis J. H. Felt & receive bids

Laurel-Con ed for erecti Plans are be lia's school. entraut-Colby for 3-story I

Jersey City

LOGKERS for Schools **Ventilated Sheet Steel**

Churchill & Spalding,

488 Carroll Ave.

ers

JS

RIES

adway

ool; \$10.0

be built

t.; \$22,000 Ashton ha

nar school

Milford. Hunt ha

. Smith ha

on Spoone ard I. Wil

figures for school.

for 8-room New school

SSER

use

REET

WIS.

tieth

TED

t

TY

Chicago, Ill.

be erected: \$50,000. Ripleywill be erected; \$50,000. Ripley—Archt. H. T. Liebert has plans for school. Escanaba—Work has begun on high school. Cadillac—Archts. Osgood & Osgood, Grand Rapids, have plans for school, St. Anne's Congreg. Franklin—Proposals received for school. Farwell—Archt. Hollister. Saginaw, has plans for school; \$10,000. Ithaca—Work has begun on \$7,000 school. Flint—12-sept school will be erected in Fifth begun on \$7,000 school. Flint—12room school will be erected in Fifth
ward; also 4-room addition to Oak
street school. Coral—Archts. J. & G.
Daverman, Grand Rapids, will receive bids for erection of school
cebebowan—Contract has been been Cheboygan-Contract has for high school. White Cloud-Plans have been completed for school.
Rapid River—\$15,000 school is con-Rapid River—\$15,000 school is contemplated. Menominee—Archt. Hebert has plans for \$20,000 parochial school. Grand Haven—Archts. Robinson & Campau, Grand Rapids, are preparing plans for addition to Akeley school; \$12,000. Grandville—Archts. Robinson & Campau, Grand Rapids, have plans for school; \$8,000. Berryville—Bids will be received for erection of school.

MINNESOTA.

MINNESOTA.

Hector—Archts, Thori, Alban &
Fisher, St. Paul, have plans for 3story addition to school; \$12,000. Le Sueur—Archt. E. J. Donohue, Gilfillan Blk., St.. Paul, has plans for 3-story addition to Sisters' Academy. Eveleth—Grade school will be built; \$25,-000. Maple Lake—Archt. Fremont D. off. Minneapolis, is preparing plans for school; \$15,000. Brainerd—\$13,-000 parochial school will be built. Madison Lake—School will be erected. Henning—Archt. Fremont D. Orff, Minneapolis, has plant for 8room school; \$15,000. St. Peter-Conract has been let for 2-story school; \$15,000. Currie—Archt. R. J. Van Deusen, Winona, let contract for school and convent; \$15,000. Bemidji -Bids will be received for erection of high school. Lakeville—Contract has been let for school. Blue Earth—Archt. E. A. Myhre has plans for 4-room parochial school. Duluth—\$13,-000 school will be erected.

MISSISSIPPI.

Winona—Andrew Johnson & Sons, Archts., Sardis, Miss., have plans for remodeling school. Meriden—Archt. P. J. Krouse has plans for school.

MISSOURI.

Springfield—Archts. Drischler & Elsner, St. Louis, have plans for academic hall, State Normal school; \$190,000. Maryville—Archt. J. H. Felt, Kansas City, has plans for normal Raisas City, has plans for normal school; \$40,000. Kansas City—Holy Rosary school will be erected 529 Campbell street. Lathrop—Plans are being prepared for \$15,000 high school. Memphis—Will issue bonds \$40,000 for erection of high school. Edgewood—Archt. Leonard Haeger, \$1,000 house beautiful for school dist. St. Louis, has plans for school, dist. No. 2; \$15,000. Kansas City—Chase school will be erected on 13th street. Carthage-Contract has been let for school. St. Louis—Plans have been prepared for Oak Hill school. Browning—Bids were received for erection of school, dist. No. 5. Polo—Archts. J. H. Felt & Co., Kansas City, will receive bids for erection of \$13,000

NEBRASKA.

Laurel—Contract has been awarded for erection of school. Omaha—Plans are being made for St. Cecella's school. Alliance—Archts. Eislia's school. Alliance—Archts. Eisentraut-Colby-Pottenger have plans for 3-story parochial school.

NEW JERSEY. Jersey City-Archt. John T. Row-

land, Jr., has plans for No. 32 school and addition to No. 14. Trenton—Plans for new commercial and man-ual training school have been endorsed. Newark—School will be built at New, Summit and High Sts. East Orange—Archt. W. B. Tubby has plans for school, Central and Maple avenues. Anglesea—School will be erected; \$15,000. Passaic—High school is contemplated. Bloomfield-Addiwill be built for Brookside school.

NEW YORK.

New Paltz—\$100,000 appropriated for erection of normal school. Geneva—Addition will be erected to St. Francis de Sales building; \$40,000. New York—Archt. C. B. J. Snyder has plans for 4-story school on 157th St.; \$130,000. Canaseraga—\$12,000 school will be erected. Patchogue—Archts. D'Oench & Yost, New York, will receive proposals for school. Nyack— Contract has been awarded for \$100,-000 school. Auburn—Archt. H. Van Buren Magonigle has plans for high and grammar school addition. Buffalo -3-story school will be erected; \$25,-00. Holley—Contract was let for high school.

NORTH CAROLINA.

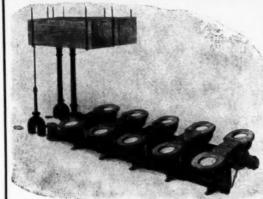
NORTH CAROLINA.
Greensboro—Bids will be received for erection of three schools; plans by Archts. S. W. Foulk & Sons and W. L. Brewer; \$30,000. Union Mills—\$6,000 school will be erected. St. Matthews—Archts. Hanby & Hanby are preparing plans for \$10,000 school

NORTH DAKOTA.

Grand Forks—Archt. W. J. Edwards has plans for Washington school. Jamestown—Hancock Bros., Archts., have plans for 4-room school at Buchanan. Sarles—4-room school will be erected; \$10,000. Tolma—2room school will be erected. May-ville—Addition will be erected to normal school. Adams—Bids will be received for 2-story school. Hampden—Bids will be received by Archt.
W. J. Edwards, Grand Forks, for erection of 4-room school. Pleasant
—Bids will be received for erection of school. University—Bids will be received for erection of school of mines building. Finley — Archts. Haxby & Gillespie, Fargo, will receive bids for erection of school.

OHIO.

Newark—Archt. Vernon Redding, Mansfield, has plans for annex to high school; \$60,000. Bloomville— Bloomville-Archt. Harlan Jones, Mansfield, has plans for school; \$12,000. Wadsworth—Archt. Vernon Redding, Mansfield, has plans for high school; \$65,000. New Lexington—Archt. Wm. P. Guin-ther, Akron, has plans for building for St. Aloysius Academy. Rathbone -Archts. Marriott & Allen, Colum-—Archts. Marriott & Allen, Columbus, have plans for technical building, Girls' Industrial school. Cincinnati—School will be erected, East Ridgeway & Whittier Ave, Chillicothe—Archt. John Schwertzer has plans for 3-story school for St. Mary's. Middletown—High school will be erected. Cleveland—Parochial school is being erected for St. Stans school is being erected for St. Stan-islaus parish; \$65,000. Mingo Junc-tion—High school will be erected. Athens—High school will be erected. Doylestown—Parochial school will be erected. Wellston—Archt. Emile M. Uhlrich, Cleveland, has plans for 2-story school. Akron—Archts. Harp-



Nelson Ventilated Double Latrines

No Foul Odors

Nelson's Ventilated Hopper Latrines AND

Ventilated Urinals

(Automatic Flush)

Write us for information and our booklet, "A Few Points on Sanitation for Schools."

MANUFACTURED BY

N. O. NELSON MFG. CO. EDWARDSVILLE, ILL. ST. LOUIS, MO.

ster & Bliss are preparing plans for 12-room school; \$50,000. Cincinnati— Archts. Anthony Kunz let contracts for school, St. Paul's Congreg., \$40,-000. Cincinnati—Archts. Samuel Han-000. Cincinnati—Archts. Samuel Hannaford & Sons have plans for 2-story school, Holy Name Congreg.; \$40,-000. Bucyrus—Will issue bonds \$17,-500 for erection of school. Ashtabula—Proposals received for erection of 2-story school, Kingsville twp. Congress—Bids will be received for 4-room school. Cincinnati—3-story school will be erected on 4th street. Barberton—High school will be erected. Elk Creek—Bids opened for school. Ashtabula—Bids received for 6-room school, Williamsfield twp. Royal—Proposals received for two schools. Linden—Archts. Dawson & Holbrook, Columbus, are preparing plans for school; Mifflin twp.; \$10,000. twp.; \$10,000.

OKLAHOMA.

Cordell-College will be erected;

OREGON.

Arleta-School will be erected. PENNSYLVANIA.

Philadelphia—Archts. Cope & Stew-ardson have plans for institute building, 16th and Arch Sts.; \$300,institute 000. Williamsport—Plans accepted for east end school. Manayunk— School will be erected for St. Mary's parish. Pittsfield-Contract has been let for school. South Sharon—12-room school will be erected on Spearman Ave. Altoona—Three 2room school will be erected on Spearman Ave. Altoona—Three 2-room schools will be erected. Camphill—Contract has been let for school, \$12,800. Philadelphia—Archt. R. E. White has bids for school; St. Mary's church of the Assumption; \$60,000. Reading—School is being erected. Canonsburg—4-room school will be erected for White Lawn Ter-

will be erected for white Lawn Terrace. Eddystone—Archt. R. W. Boyle, Philadelphia, has plans for school, St. Rose church; \$30,000. Aristes—Contract has been awarded for school; \$10,500. Allegheny—Archt. F. C. Sauer has plans for school, 5th word. ward. McKees Rocks—Archt. F. C. Sauer has plans for 2-story school, May Ave. Scranton—Proposals will be received for erection of school No. 24, Annex No. 23, Annex No. 26, addition to No. 28, school No. 41, 21st ward. Allegheny—Archt. F. C. Sauer, Pittsburg. has plans for parochial

school; \$39,000. Philadelphia—Mt. Bethel twp., Northampton Co., will build \$20,000 high school.

RHODE ISLAND.

North Kingston—Archts. W. R. Walker & Son have sketches for 8-room high school. Providence—School will be erected for Institute for the Deaf; \$21,000.

SOUTH CAROLINA.

Summerton—School will be built; 12.000. Greenwood—Archt. C. C. Wilson, Columbia, has been awarded contract for school.

SOUTH DAKOTA.

Fargo—High school will be erect-d. Armour—\$30,000 school will be erected.

TENNESSEE.

Springfield-Manual training school will be erected. Barbourville—Contract has been awarded for \$50,000 school. Ridgdale-High school will be

TEXAS.

Fort Worth-8-room school will be erected. Rule—3-story school will be erected. Beaumont—Bids opened for erected. South Park school. Snyder—\$8,000 school will be erected on west side. school will be erected on west side. Oak Cliff—Archt. Nicol has plans for school. Cleburne—Bids will be received for high school. Aubrey—4-room school will be erected. Avondale—Plans completed for school on Jefferson St. Gatesville—Archt. T. Brooks Pearson, Waco, has plans for school; \$25,000. Beaumont—Archt. F. W. Steinman has plans for \$15,000 school. Blossom—Erection of \$10,000 school is contemplated.

VIRGINIA.

Norfolk-4-room annex will be built for 5th ward school. Western Branch—Colored schools will erected in Piedmont Heights, and Mt. Herman; \$10,000. Suffolk—Bids will be received for erection of 2room school, Holy Neck. Wise—Archts. Holmboe & Lafferty, Clarksburg, W. Va., have plans for 11-room school; \$25,000.

WASHINGTON.

Leavenworth—8-room school will be erected. Hover—4-room school will be built. Porter—Bids will be received 2-room school. Everett-Plans are being made for grade school.

MANUAL TRAINING **EQUIPMENTS**

WE SEND sample Lathes, Benches and Vises ON APPROVAL.

We give you an opportunity to see how they look and work under your conditions. You cannot afford to buy these important items by guess or hearsay.



Write for illustrated catalogue.

E. H. SHELDON & CO., 279 Madison St., Chicago.

WEST VIRGINIA

-Archt. J. R. Gieske has plans for 2-story school, also 2-story will be received by Archts. Alexander & Chaplin, New Martinsville, for erection of county high school.

WISCONSIN.

Hancock—Archt. C. H. Williams, Portage, has plans for high school; \$15,000. Milwaukee—School will be erected for St. Canting Co. erected for St. Cantius Congreg. rochial school will be erected at Layton Park. Maiden Rock—Bids be received for erection of ol. Winneconne—Archts. Chandschool. ler & Park, Racine, have plans for erection of agricultural school, Winnebago county. Oconomowoc-Contracts have been let for 8-room school in east ward. Madison—Archts. Claude & Starck let contract for 2story school, St. Patrick's Congreg. Oshkosh-Proposals will be received oshkosh—Proposals will be received for erection of agricultural school. Milwaukee — Archts. Leenhouts & Guthrie have plans for two schools, 10th and 11th wards; \$168,000. Hurley—Proposals will be received for erection of 4-room school. Racine—Archt. B. H. Jillson let contract for college building; \$10,000.

Archts. E. Brielmaier & Son. Milwaukee, will prepare plans for school for Catholic congregation. Lykens -School will be erected in Dist. No. 1, Town of Balsam Lake. Sherwood—Archt. Wm. E. Reynolds, Green Bay, prepared plans for 1-story frame school. Depere — Addition is being erected to St. Mary's school. Superior -High school will be erected. Nel-sonville-Addition will be built to Beloit - \$6,000 appropriated for school in the northeast end. perior-Plans have been formulated for new school for parish of Sacred Heart Cathedral. Lavalle—New school will be built. Grand Rapids—Archts. will be built. Grand Rapids—Archts. Chandler & Park have plans for manual training school; cost, \$25, Winneconne — Archts. Chandler \$25,000. Park have plans for manual training school; cost, \$25,000. Hancock—Proposals will be received for construction of high school. Kenosha-Archt. B. H. Jillson, Racine, will receive bids for 2-story College of Commerce building; cost, \$10,000. Maiden Rock— Commerce Proposals will be received for brick and stone school. Appleton—Archts. Foeller & Schober let contract for 6-room school. Beloit—Addition will be built to high school; cost, \$100,-000. Milwaukee—New schools will be erected in Tenth district, Eleventh district, additions in Fifteenth and Thirteenth districts. Ripon—School will be erected for St. Wenceslaus' Ripon-School Algoma-School church. will church. Algoma—School will be erected. Butternut—New school will be erected in district No. 9.

CANADA.

Strathcona, Alta.—Archts. Johnson & Limes, Edmonton, Alta., have prepared plans for a collegiate insti-tute; \$60,000. Big Fork, Ont.—Frame school will be built. Deloraine—Ce-ment block school will be built. Peterborough, Ont.—Normal school will be erected. Miniota, Man. Archt. A. F. Nesbit is preparing plans for school. Lethbridge, Alta.—School will be erected. Dresden, Ont.—Vote carried to erect new school; cost, \$27,000.
Lily Bay, Man.—Contract has been awarded for the erection of the Parkview school.

Ottawa-4-room addition will be built for Percy St. school; \$35,000. Also 8-room addition to Osgoods St. school; \$60,000. Innisfall, Man.—Contract awarded for 8-room school.

Petersborough, Ont.—Contract let for 6-room addition; north ward school. Prince Albert, Sask.—High school will be erected on Central Ave.; \$100,000. Montreal—Archts. Ross & MacFarlane have plans for school on Westmount Ave. North Brattleford, Sask.—Archts. Storer & Van Egmond, Regina, Sask., are preparing plans for school; \$30,000. Heward, Sask.—Archts. Storer & Van Edmond, Regina, Sask., are preparing plans Regina, Sask., are preparing plans for school; \$12,000. Toronto, Ont.—

Addition will be erected to main building, Ontario Agricultural Colbuilding. Dauphin, Man. be erected. St -4-room school St. James—Archt. Paul M. Clemens, Winnipeg, has plans for school; \$9,000. Winnipeg, Man --Archts. Hooper & Walker have plans 5-story school building, Manitoba Agricultural college.

SUPPLIES AND EQUIPMENT.

The members of the school furniture and church seating combine, who were indicted some months ago. have been fined by Judge Landis of the United States district court for violation of the Sherman anti-trust law. The total fines aggregate the sum of \$43,000.

The Board of Education, West Des Moines, Iowa, has placed half a dozen of the McIntosh Projection Lanterns in their various grade

The old saw says you can never have too much of a good thing, therefore it is not amiss to once more call attention in these columns to the "An - Du - Septic" Dustless Crayon as being par excellence the foremost crayon of its kind on the market today. policy of the manufacturers, Binney & Smith Co., of New York, is to turn out goods first class in every respect and their guarantee of the purity of their product should justify superintendents in adopting same for use in the schools. Only refined precipitated material is used in the manufacture instead of the impure chalk and clay commonly used. Combined with a strong antiseptic, the crayon is absolutely non-injurious. It is free from grit and substances, producing a clear white mark, is easy to erase, and will outwear from three to four of the ordinary crayon, thus making it most economical. Many affections of the throat and lungs as well as the eyes have been directly traced to the irritating effects of chalk dust. After an exhaustive series of experiments, a hygienic crayon has been produced; one which in addition to the question of health, has proved a comfort to every teacher who has suffered the ills attendant upon the use of the old style crayon-dust upon the hair, hands and clothes. The above mentioned firm are always pleased to submit samples to teachers interested in a sanitary schoolroom.

The Eastern Illinois Normal School at Charleston, Ill., has recently added another McIntosh College Bench Lantern to its equip-

The blackboard contract, city of Dubuque, Iowa, has been awarded to M. H. E. Beckley, Chicago.

West New York, N. J. Contract for school furniture for public school awarded to the New Jersey School-Church Furniture Co.

The Johnson Window Shade Adjusters have won considerable favor among school authorities for their simplicity and durability. The system dispenses with rods, bars and other paraphernalia which tend to complicate the working parts. It is noiseless and positive of operation and can be easily adjusted to

any window casing. In new buildings the window stop can be arranged to hold the device.

Samples and illustrated catalogue, containing many testimonials from prominent people, will be sent to interested parties by the manufacturer, Mr. R. R. Johnson, 161 Randolph St., Chicago.

Portsmouth, Ohio. Four hundred desks will be purchased from the American Seating Company.

Lincoln, Neb. Supplies and apparatus for the chemical and physical laboratories will be furnished by the Bausch & Lomb Optical Co.

Elections and Appointments.

Mr. Charles L. Van Cleve has been elected superintendent of schools of Toledo, Ohio, to succeed Mr. H. J. Eberth. Mr. Van Cleve was for eighteen years superintendent at Troy, O., and during the past six years has held a similar position at Mansfield. The election is for four years, at a salary of \$4,000 the first two years and \$4,500 the remaining

Mr. William M. Slaton has been selected to succeed his father, Major W. F. Slaton, as head of the Atlanta, Georgia, public schools. The latter will act as superintendent emeritus and will, if possible, be pensioned by the school board.

Springfield, Ill. The school board has unanimously elected Mr. J. H. Collins, to the position of superintendent of schools. Mr. Collins held the office for seventeen years previous to July, 1905, and was not an applicant this year.

Brandenburg, re-elected. Term, three years.

Seward, Nebr. Geo. K. Kindler,

superintendent. Ensley, Ala. Supt. Thomas R.

Walker, re-elected.

Council Bluffs, Ia. Supt. W. N. Clifford, re-elected.

M'Donough, Ga. Supt. Geo. W. Camp, re-elected.

Holyoke, Mass. James J. O'Donsuperintendent, re-elected. nell. Salary, \$3,000.

Leavenworth, Kans. G. W. Kendrick, superintendent, re-elected. Salary, \$2,400.

Little Rock, Ark. Supt. B. W. Torreyson, re-elected, for a term of two years.

Joplin, Mo. Supt. L. J. Hall has been re-elected.

Jonesboro, Ark. Supt. D. T. Rogers, re-elected.

Coffeyville, Kans. Supt. W. M. Sinclair, re-elected; salary, \$1,800. Newcastle, Ind. Supt. J. C. Weir, re-elected.

Cedarville, O. Supt. F. M. Reynolds, re-elected. Salary, \$100 per

Independence, Kans. Supt. Risdon, re-elected; salary, \$2,000.

Weatherford, Tex. Supt. T. W. Stanley, re-elected.

Beatrice, Nebr. Supt. C. A. Fulmer, re-elected; term 3 years; salary, \$2,000.

NOW FOR TELEPHONES

"Tallow Candle" Is the present method of

SCHOOL COMMUNICATION







PRACTICABILITY

Before inaugurating our school teleph netore maugurating our school telephone advertising campaign, we conclusively demonstrated by time tests of actual installations, the practicability of our apparatus. Accompanying illustrations show types of our inexpensive, medium, and the most up-to-date systems.

DESCRIPTIVE MATTER

"School Telephone" Bulktin, No. 6, carefully illustrating and describing eight distinct systems, and "Telephone Practice" Bulletin, No. 7, illustrating actual installations, mailed on request,

THE ELECTRIC GOODS MFG. CO.

115 Purchase St., Boston, Mass.

TELEPHONE SPECIALISTS 21 years of electrical specialty experience.

We have the plant, the men, and the experience.

Mason City, Ia. Supt. W. A. N. E. A. MEETING AT LOS ANGELES

\$64.50 from Chicago to Los Angeles or San Francisco and return, June 22 to July 5, account meeting of the National Educational Association at Los Angeles in July, via the

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY

Return limit September 15. Through service to California, and less than three days on the way, via The Overland Limited, from Union Station, Chicago, 8 p. m. daily. Standard and tourist sleepers at 10.25 p. m. daily. Descriptive folders free on request.

F. A. MILLER. GENERAL PASSENGER AGENT, CHICAGO



CABINET BENCHES Adjustable

Serviceable — Conves-ient for Schools, Work-shop and Home.

Catalog on Request CHANDLER & BARBER BOSTON, MASS

ION

ephone ely denstallaaratus, ypes of e most

G. CO.

ING

LES

go

an

rn,

he nal no-

PAUL

ber to han ay, nit-ton, ily. ist m. old-

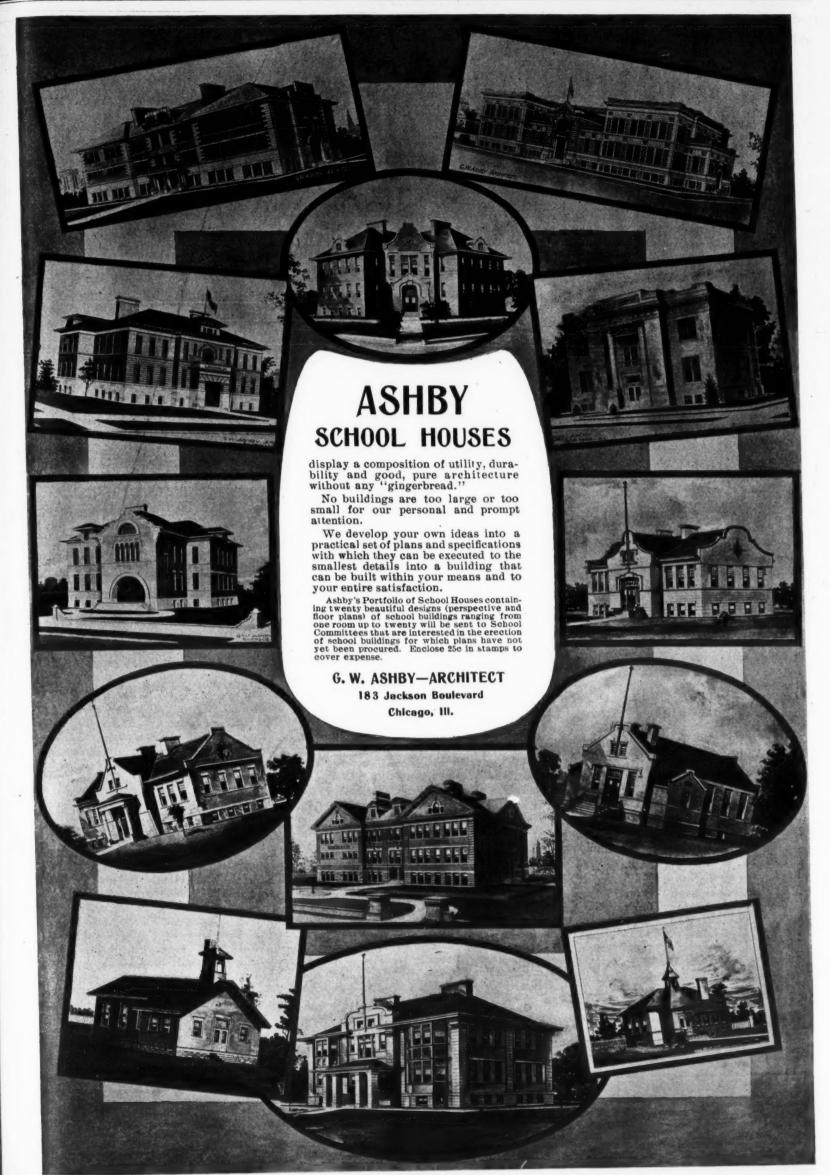
GENT,

Adjustable

Convencols, Workme.

Request
& BARBER
mer St.
MASS.

ass.



In writing to advertisers please mention "SCHOOL BOARD JOURNAL."



The Schoolhouse.

Its heating and ventilation. By Joseph A. Moore, inspector of public buildings, state of Massachusetts. 204 pages. Price, \$200. Joseph A. Moore, Publisher, Boston, Mass

This book is the result of eighteen years spent in supervising the construction and testing the operation of school heating and ventilating systems. In the first half, the author lays down principles which should guide the architect and heating engineer in planning and crecting the school house and its heating apparatus. The theory of ventilation in its practical applications is discussed fully and with careful attention to details. Other related topics, such as sanitary appliances, the care of heating apparatus, etc., are discussed, each in a brief chapter.

In the second part are given plans and descriptions of school buildings from a one-room to an eight-room structure. A small two-story high school and several types of sanitary buildings are illustrated and described. A set of twenty-seven tables used by heating engineers and illustrations of boiler and radiator settings complete the volume.

Throughout the author is careful not to make use of theoretical or scientific descriptions and arguments. Practical, plain methods and ideas, proven by actual, satisfactory use are presented and urged. The book is of immense practical value and deserves a place in every school board office and in the library of every school architect and engineer.

The New Practical Reference Library.

Complete in five volumes—Editors, Chas. H. Sylvester, a well known Wisconsin educator, and a corps of five assistant editors, all of recognized literary and educational ability—Illustrated. The Dixon-Hanson Co., Chicago.

In the February issue the School Board Journal reviewed Vol. 1 of this set of books, finding it satisfactory and complete in every way. Since February the remaining four volumes of the set have come from the press and what the first book promised the other books have fulfilled. We can safely say that in the New Practical Reference Library is found the best possible set of reference books for the common schools and high schools, for the parent, and for the busy man or woman in search of facts, briefly, clearly and completely told.

In our former review of Vol. 1 we spoke of the convenient size of the volume and the clear, beautiful type and good paper. The titles are respelled phonetically to teach correct pronunciation. The books are splendidly illustrated with full-page colored half-tones, lithographs, colored maps and relief maps, pen and ink portraits, etc.

One very great improvement over other encyclopaedias lies in chief facts given about eminent living men and women such as Lyman Abbott, Joseph Folk, Clement Falliers, etc. There are few books to which one can refer for such information.

SCHOOL BOOKS of All Publishers Library Books and Dictionaries At Wholesale Prices Teacher's Helps. Keys. Translations, PLAYS Song Books. Maps. Globes, Black. PLAYS boards, Recitation Books.
Complete Catalog FREE postpald upon request Hall & McCreary, 253 Wabash Ave. CHICAGO, ILL.

In this set of books the work was divided into a number of departments such as geography, history, literature, geology, peda-gogy, biology, nature study, etc. and each department was looked after by a specialist. This has resulted in a well balanced arrangement of material, complete, yet concise. For instance, in geography, each country is taken up under the following heads: Surface and drainage, mineral resources, climate, agrimanufactoculture. ries, transportation, inhabitants, education and language, government and religion, literature and art, army and navy, cities, fisheries, history and commerce. In history for example:-the short four page account of the civil war is a splendid review for one who is rusty and also is a fine thing for beginning one study to help him get the whole before getting the parts.

History of Educacation is discussed un-

der the following heads: The Oriental Nations; Ancient Classic, Greece, Rome; Christian Era in Europe; Early Period, Reformation; United States; Colonial Period, National Period, Congressional Land Grants, Free Schools, State Universities, Bureau of Education.

Medical information on subjects ranging all the way from tuberculosis, which is illustrated by a full page colored plate, to scalds and burns, whose diagnosis is given, may be gathered from these volumes.

These few illustrations from geography, history, history of education, and medicine show but briefly how strongly and yet simply each subject is handled.

MR. BECKLEY'S SUCCESS.

It is a matter of comment that many favorable contracts have recently been awarded to M. H. E. Beckley, Chicago, to whom we extend our hearty congratulations. Mr. Beckley has been active in the school supply business for the past 20 years. He was formerly associated with W. A. Olmsted in the manufacture of the Olmsted Artificial Slate Blackboards and afterwards took over that part of Mr. Olmsted's business, organizing the Standard School Furnishing Co., of which company he was president for a number of years.

About two years ago he began business in his own name, continuing to make a specialty of blackboard work. He also handles school furniture, Venetian blinds, and general school supplies.

Plaster Casts

FOR DRAWING AND MODELING:

Reproductions from Antique, Mediaeval and Modern Soulpture Etc. 4 4 for 4 4 4 SCHOOLROOM DECORATION.

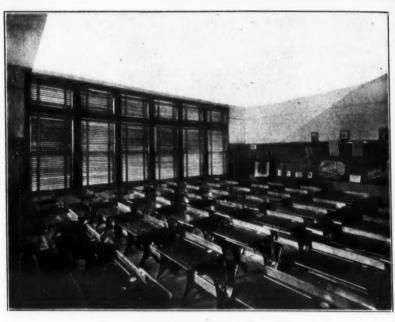
These Art Productions have never failed to receive the highest award when placed in competition with other makes.

C. Hennecke Co.

Milwaukee, - Wis.



Send for Catalogue.



Controlling the Light in Classroom.

Mr. Beckley is well known and enjoys the reputation of promptly and carefully fulfilling his agreements. School officers dealing with him may rest assured that their contracts, or orders, will have the most careful attention.

This illustration is from a photograph of a classroom in the new McKinley school at East Chicago, Ind.

It is of particular interest, as it shows how the light is controlled by use of Venetian blinds. Unlike ordinary curtains they do not exclude the light, but throw it into the room and so equalize it that every pupil has good light without any glare or shadows. They effectually overcome the obstacle of strong lights and keep shadows in the classroom.

The McKinley school is equipped throughout with the well known Burlington Venetian Blinds, furnished by M. H. E. Beckley,

While the first cost of Venetian blinds is more than for ordinary curtains, the Board of Education feel that it is a matter of economy, as their great durability make them cheaper in the end.



WIMMER SHADE ADJUSTERS for lowering the shade from

he top as well as raise from he bottom. Can be attachd to any window, no specal arrangements required; iny spring roller can be used without altering; they are the best; get our illusrated catelogue. That's all

. I. WIMMER & CO.

Geography, Gi Co., \$50,000.

Elements of lyn & Bacon,
Bookkeeping

Book keeping
Bogle, The Ma
Writing—The Ma
\$40,000.

Algebra — Charles Scrib The comm books, which boards see fit: Brigham's

Brigham's
Geography, A
on United S
Advanced Wo
Scribner's S
Law, Sadler,
ber Book, Sil-

Danville, I been adopted ally:

Hart's Esse ley's Elemen Geography, H ley's Caesar, lish Literatu Myers' Hist Gunnison & Denver, (C

Schools (Girthe Colorado 1907-1908. Ginn & Colorado ing the follo

Central Boa Fittsburg, I 1907: Smith's I vanced arith

vanced arith
Blaisdell's
edition; Ho
Our Bodies
Montgome

and Leading
Frye's Fir
mar School
Robinson's
Hodge's N
Hill's Gee
These boo

use in the p School af in the new adoption of the voters,

form text-b Among the ing Books Douglas Co City, Colo.; market, N.

Dayton, of the following Lesebuch, 1 Art Educate Co.; Deut Book Co.

Books re Geography, tronomy, G Commercial Modern Book Master's H can Book (

Pittsburg the central ed the add

Kansas State Adoptions.

(Concluded from Page 21)

Geography, Gilbert & Brigham, D. Appleton & Co., \$50,000.

Elements of Physics-Carhart & Chute, Allyn & Bacon, \$22,000.

Bookkeeping - Comprehensive Bookkeeping, Bogle, The Macmillan Co., \$4,000.

Writing-The Outlook Series, O. P. Barnes, \$40,000.

Algebra — Elementary Algebra, Marsh, Charles Scribner's Sons, \$10,000.

The commission approved the following books, which may be used as the local school hoards see fit:

Brigham's Laboratory Manual of Physical Geography, Appleton & Co. Outline Booklet on United States Constitution, George Rose. Advanced Work in Civil Government, Charles Scribner's Sons. Richardson's Commercial Law, Sadler, Rowe & Co. Van Amburgh Number Book, Silver, Burdett & Co.

TEXT BOOK ADOPTIONS.

Danville, Ind. The following books have been adopted and will be introduced gradu-

Hart's Essentials of American History, Bailey's Elementary Agriculture, Dyer's Physical Geography, Hadley's Physics, Gunnison & Harley's Caesar, D'Ooge's Cicero, Howe's English Literature, Wells' Geometry and Algebra, Myers' Histories, Bennett's Latin Grammar, Gunnison & Harley's First Year Latin Book.

Denver, Colo. Kern's Among Country Schools (Ginn & Co.) has been selected for the Colorado State Teachers' Reading Circle,

Ginn & Company take pleasure in announcing the following important adoptions by the Central Board of Education of the city of Fittsburg, Pa., meeting Tuesday, May 14,

Smith's Primary, Intermediate and Advanced arithmetics.

Blaisdell's Child's Book of Health, revised edition; How to Keep Well, revised edition; Our Bodies and How We Live, revised edition. Montgomery's Beginner's American History

and Leading Facts of American History. Frye's First Steps in Geography and Grammar School Geography.

Robinson's History of Western Europe.

Hodge's Nature Study and Life. Hill's Geometry for Beginners.

oys the

ilfilling

g with

acts, or

oh of a

at East

ws how

enetian

do not

e room

as good

hev ef-

g lights

oughout

enetian

Beckley.

linds is

oard of

conomy,

cheaper

ition.

These books have been selected for exclusive use in the public schools.

School affairs are reported to be unsettled in the new state of Oklahoma, pending the adoption of the constitution. As submitted to the voters, this instrument provides for uniform text-books in all schools.

Among the recent adoptions of Berry's Writing Books may be mentioned Colfax, Ia.; Douglas County, Neb.; Amity and Central City, Colo.; Oradell, N. J.,; Epping and New-

market, N. H. Dayton, O. The school board has adopted the following text books: Erstes Sprach und Lesebuch, Henry Holt & Co.; Text Books of Art Education, Book IV, Prang Educational Deutsches Schoenschreiben, American Book Co.

Books readopted are: Adams' Commercial Geography, D. Appleton & Co.; Young's Astronomy, Ginn & Co.; Sensenig & Anderson's Commercial Arithmetic, Silver, Burdett & Co.; Modern Bookkeeping, American Book Co.; Mc-Master's History, Natural Geography, American Book Co.

Pittsburg, Pa. The text book committee of the central board of education has recommended the adoption of the following books to re-

place those now in use: Angell's Psychology, Henry Holt & Co.; Huntington's Elements of English Composition, The Macmillan Company; Morly's Outlines of Ancient History, American Book Company; Hodge's Nature Study and Life, Ginn & Co.; Robinson's History of Western Europe, Ginn & Co.; Hill's Geometry for Beginners, Ginn & Co.; (grammar grades), Gordon's Comprehensive Method of Reading Chart and Readers I and II, D. C. Heath & Co.; Benedict's Word Book and Spellers I and II, Maynard, Merrill & Co.; Smith's arithmetics; Frye's geographies; Montgomery's histories; Blaisdell's physiologies, Ginn & Co.; Free Hand Writing Books, Christopher Sower Company; Phillips' Nation and State, Christopher Sower Company.

The books were formally adopted, May 14, 1907.

Ginn & Co.'s High School and College Text Book catalogue for 1907 has just been issued. A copy will be mailed to any superintendent or high school teacher on request.

SUMMER SCHOOL OF MUSIC.

The Seventeenth Annual Sessions of the American Institute of Normal Methods will open in Evanston, Ill., and Boston, Mass., July 9, 1907. The Western Session will be held at Northwestern University in Evanston under the charge of Frank D. Farr, the Eastern, in the New England Conservatory of Music, Boston, Mass., William M. Hatch, business rianager.

Within the last decade a change has taken place in the teaching of music. Where formerly an effort was made to effect concise thinking in exercises and songs in the lower grades. spontaneous singing has replaced it. Instead of correct reading of music, proper interpretation and musical appreciation are now emphasized. Where much importance was attached to gradation and working plans, the quality of music itself is made the first requisite while the child's development guides its organization and gradation.

It was with this in mind that Silver, Burdett & Company issued the Modern Music Series. They were designed to comply with a new ideal and aid in solving a new problem. Time has been called upon to aid as a test, and the scries has withstood the test.

To aid, augment and lead to a greater appreciation of the work Silver, Burdett & Company has again made announcement of the Summer sessions. The fundamental purpose is the illustration of the method of the Modern Music Series and a discussion of the principles for which it stands.

The faculty of the Western school will consist of persons who have had real classroom experience; most of the members have taught the series from the time of its inception. The members are:

Will Erhart, Supervisor of Music, Rich-

Floors and Health

Compare two floors of the same age—one that has been systematically treated with Standard Floor Dressing, and one that has received just ordinary attention. What do you see? The flooring that has been properly cared for is smooth, and neither shrunken nor splintered; while the other shows its age because of its shrunken appearance and the cracks and splinters that mar its surface. Moreover, you will find that the labor required to keep the dressed floor clean is much less than that spent on the other floor. In addition to these features the hygienic reasons for using

these features the hygienic reasons for using

STANDARD FLOOR DRESSING

must also be considered: In schoolrooms having untreated wood floors the dust is kept in constant agitation by shuffling feet. The floor treated with Standard Floor Dressing collects and holds the dust, and saves the air from contamination—the danger from disease contagion caused by the dust thus being very much lessened.

Standard Floor Dressing is sold in barrelsand cansof varying capacity by dealers generally. Three or four applications a year with patented Standard Oiler gives best results.

Standard Oiler gives best results.

We will apply Standard Floor Dressing without charge, to the floor of one room or hall in any Hospital, School or other public building, to demonstrate that all we claim for it is true. Standard Floor Dressing is not intended for use on varnished, waxed or polished floors or for use in private houses.

Testimonials and interesting reports from medical authorities on floors that have been treated with Standard Floor Dressing gladly furnished upon request.

STANDARD OIL COMPANY

STANDARD OIL COMPANY
(Incorporated)

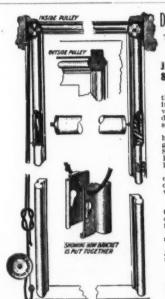


mond, Ind., Superintendent; Edward B. Birge, Supervisor of Music, Indianapolis, Ind.; Robert Foresman, New York; Eleanor Smith, in charge of Department of Music, Chicago School of Education; Anna M. Allen, Supervisor of Music, Peoria, Ill.; Nannie C. Love, Indianapolis, Ind.; Frances A. Wright, Supervisor of Music, Des Moines, Iowa; Margaret Salisbury, J. F. McCullough, Eunice R. Plumb, Chicago, Ill.

Wapakoneta, O. The common pleas court of Putnam county, in the case of Miss Lena Martin vs. the school board of Palmer township, on appeal has decided that a school teacher can collect extra pay for janitor work unless such services are made a part of the contract. The verdict awarded the complainant \$16 for services rendered, at the rate of \$2 a month.

Chicago, St. Louis, Detroit, Washington, Denver and Cleveland pay men and women on an equal basis.

Boston, Cincinnati, Hartford, Jersey City and New York do not.



Daylight Easily Controlled

This cut shows the simple and durable con-struction of

JOHNSON'S WINDOW SHADE ADJUSTERS

They LOWER and RAISE he shade ROLLER admitt-ng the UPPER light and entilation. All of the win-low or any part of it can be haded.

ed. ring the past 6 years been adopted, and are tly appreciated in many

furnish.
Send for 20-page Booklet,
also free.
Sample of Stop and Adjuster bracket sent if destred.

R. R. JOHNSON, Mfr.

161 Randolph St.,

Airectory for School Supplies

The names given below are those of the leading and most reliable School Supply Houses in the United States. None other can receive a place in this Directory. Everything required in or about a school house may be secured promptly and at the lowest market price by ordering from these Firms.

APPARATUS-GENERAL ican Seating Co...N.Y. & Ch'go on City Edu. Co...Chicago nneil School Supply Co.. Philadelphia

APPARATUS—SCIENTIFIC.

APPARATUS—SCIENTIFIC.

blumbia School Supply Co...

Indianapolia, Ind.

H. Stoelting & Co... Chicago
cintosh Stereopticon Co. Chicago
miral Scientific Co... Chicago
musch & Lomb Opt. Co...

Rochester, N. Y.

ARCHITECTS-SCHOOL. Chas. L. Lesser Milwaukee
W. R. Parsons & Son Co. ...
Des Moines, Ia.
A. H. Dyer Co. ... Fremont, Neb.
G. W. Ashby, 183 Jackson
Blyd. ... Chicago

BADGES.

BELLS—DEALERS.

McConneil Sch. Supply Co...Phila
E. W. A. Rowles.......Chicage
Atlas School Supply Co...Chicage
Orr & Lockett Hdwe Co...Chicage
L. A. Murray & Co...Kilbourn, Wis

RELLS-MANUFACTURERS.

Louis Bell Fdry..... Mo. BIOLOGY SUPPLIES.

A. Sphung North Judson, Ind. BLACKBOARDS-COMPOSITION BLACKBOARDS—COMPOSITION
N. Y. Silicate Book Slate Co.N. Y.
American Seating Co.N. Y. & Ch'go
McConneil Sch. Supply Co... Phila.
B. D. Kiger & Co... Indianapolis
Haney Sch. Furn. Co...
Grand Rapids, Mich.
Union School Furn. Co... Chicago
B. W. A. Rowles...... Chicago
Atlas School Bupply Co... Chicago
Garden City Edu. Co... Chicago
Weber Costello Co... Chicago H. U. A. Burray & Co... Kilbourn, Wis.
Rand, McNally & Co......
Chicago and New York

BLACKBOARDS-OUTLINE Peckham, Little & Co.....N. Y.
N. Y. Silicate Book Slate Co.N. Y.
L. A. Murray & Co..Kilbourn, Wis

BLACKBOARDS—NATURAL BLATE.

BLINDS. E. W. A. Rowles......Chicago L. A. Murray & Co..Kilbourn, Wis.

BOOK-COVERS. ook Cover Co...... Springfield, Mass. BRUSHES.

& Lockett Hdwe Co.. Chicago BRUSHES-DUSTLESS. (Manufacturers.) Milwaukee Dustless Brush Co. Milwaukee,

CAPS AND GOWNS. Cotrell & Leonard ... Albany, N. Y. CERAMICS.

b Pottery Co......Chicago

CLASS PINS. C. Haskeli.....New York
nde & Upmeyer Co.....
Milwaukee, Wis.

CLAY WORK SUPPLIES.

CLOCKS-PROGRAM.

CRAYONS—DUSTLESS. (Manufacturers.) American Crayon Co., Sandusky, O.

(Dealers.)

CRAVONS-WATER COLOR.

DEAFENING QUILT. DIPLOMAS.

Ames & Rollinson Co......N. Y.
J. A. Lowell Banknote Co., Boston
McConnell Sch. Supply Co...Phila.
E. W. A. Rowles......Chicago
Atlas School Supply Co...Chicago
B. C. Kassell.......Chicago
L. A. Murray & Co..Kilbourn, Wis.

DISINFECTANTS FOR SCHOOLS. Wagoner's Disinfectant Co.

Knightstown, Ind.
Formozone Hygienic Mfg. Co.,
Chicago

DRAWING SUPPLIES.

ENGRAVERS Clark Eng. & Ptg. Co... Milwaukee

ERASERS

FLAGS AND BUNTING.

FLOOR DEAFENING.

FLOOR OIL. Standard Oll Co.....New York

GLOBES.

HEATING AND VENTILATING ENGINEERS.

INK-MANUFACTURERS.

Mineral Tablet Ink Co...... Pueblo, Colo.

INK WELLS.

Squires Ink Well Co...Cheswick, Pa. U. S. Inkwell Co.. Evansville, Ind. (Dealers.)

Atlas School Supply Co...Chicago Haney School Furn. Co......Grand Rapids, Mich.

KINDERGARTEN SUPPLIES. Milton-Bradley Co.....Springfield, Mass. W. A. Rowles Chicago os. Charles Co...... Chicago

LABORATORY FURNITURE. Central Scientific Co..... Chicago

LANTERN SLIDES.

LIQUID SLATING.

LOCKERS_Metal. Churchill & Spalding Chicago MANIKINS.

American-Thermo Ware Co. . N. V. MANUAL TRAINING SUPPLIES. MANUAL TRAINING SUFFLIES.
Chandler & Barber. Boston
Milton-Bradley Co. Springfield, Mass.
American Seating Co. N.Y. & Chigo
E. H. Sheldon & Co. Chicago
M. H. E. Beckley. Chicago
Central Scientific Co. Chicago
Orr & Lockett Hdwe Co. Chicago
Moore Mfg. Co. Springfield, Mo.

MAPS.

Peckham, Little & Co.....N. Y.
C. W. Bardeen...Syracuse, N. Y.
American Seating Co..N.Y. & Ch'go
McConnell Sch. Supply Co...Phila.
Peabody Sch. Furn. Co...
No. Manchestey. Ind.
Hansy School Furn. Co...
Grand Rapids, Mich.
S. D. Kiger & Co...Indianapolis
E. W. A. Rowles.... Chicago
M. H. E. Beckley.... Chicago
M. H. E. Beckley.... Chicago
Atlas School Supply Co... Chicago
Atlas Good Control Co... Chicago
A. J. Nystrom & Co... Chicago
Weber Costello Co.. Chicago H'ts.ili.
Moore Mfg. Co... Springfield, Mo.
L. A. Murray & Co.. Kilbourn, Wiz.
Rand, McNally & Co...

MEDALS.

MEDALS.

MEDALS.

WHEN YOU WRITE PLEASE MENTION THIS DIRECTORY.

PENCILS. (Manufacturers.)
Dixon Crucible Co.Jersey City, N.J.
Eagle Pencil Co.......N. Y. PENCIL SHARPENERS.

PENS.

(Manufacturers.) PHYSICAL AND CHEMICAL

APPARATUS. APPARATUS.

Columbia School Supply Co...
Indianapolis, Ind.
C. H. Stoelting & Co... Chicago
Wm. Gaertner & Sons... Chicago
E. W. A. Rowles.... Chicago
Central Scientific Co... Chicago
L. A. Murray & Co..Kilbourn, Wis.
Bausch & Lomb Opt. Co...
Rochester, N. Y.

PLASTER CASTS. Hennecke Co...Milwaukee, Wis.

PORTABLE SCHOOL BUILDINGS. American Portable House Co. Seattle, Wash. POTTERY WORK SUPPLIES. Webb Pottery Co......Chicago

PROGRAM CLOCKS.

RAFFIA. RELIEF GLOBES.

McConnell Sch. Supply Co...Phila. M. H. E. Beckley......Chicago Moore Mfg. Co...Springfield, Mo. L. A. Murray & Co..Kilbourn, Wis. RELIEF MAPS.

ROOFING SLATE J. Johnson & Co.......N. Y.
na. Structural Slate Co....
Easton, Pa.
nan Struct. Slate Co....
Bangor, Pa. SANITARY ENGINEERS.

SANITARY FIXTURES.

SANITARE FACTOR OF THE STATE OF SCHOOL BLANKS.

Columbia School Supply Co...
Indianapolis, Ing
Haney School Furn. Co...
Grand Rapids, Mich
American Seating Co.N.Y. & Ch'ge
E. W. A. Rowles. Chicage
M. H. B. Beckley. Chicage
Central Scientific Co... Chicage
Union School Furn. Co... Chicage
Lake Shore Furn. Co... Chicage
Weber Costello Co.. Chicago H'ta,IL
Atlas School Supply Co... Chicage
L. A. Murray & Co... Klibourn, Wa
Moore Mfg. Co... Springfield, Ma

SCHOOL SUPPLIES.

STATIONERY.

STATUARY.

C. Hennecke Co.....Milwaukee

TEACHERS' AGENCIES.

Hathaway Teachers' Agency.. Bennington, VL Hathaway Teachers' Agency.

Fisk Teachers' Agency.

Chicago, Boston
Teachers' Exchange.

Bostos
Fisher's Teachers' Agency...Bostos
Pratt Teachers' Agency...Bostos
Pratt Teachers' Agency...Bostos
Pratt Teachers' Agency...Waw York
Albany Teachers' Agency...

School Bulletin Agoy..Byracuss.N.Y.
Schermerhorn Tchrs' Agoy.N. Y.
The Teachers' Agency.

Harrisburg, Pa.
Penn Educational Bureau, Dept. D

Thurston Teachers' Agency. Chicago
Albert Teachers' Agency. Chicago
Yates-Fisher Teachers' Agency. Chicago
Yates-Fisher Teachers' Agency.

Chicago

Teachers' Agency.

Chicago

Teachers' Agency.

Chicago
Yates-Fisher Teachers' Agency.

Chicago
Yates-Fisher Teachers' Agency.

Chicago

Hazard Teachers' Agency.....Minneapolis Midland Agencies Minneapolis
Midland Agencies Warrensburg, Ma
Colo. Teachers' Agency Denver
Rocky Mountain Tchrs' Agey
Denver, Colo.
Hapgoods N. Y., Chicago, Etc.
Cal. Teachers' Agey—Los Angeles

TYPEWRITERS.

WATER COLOR PAINTS.

WALL DEAFENING.

WINDOW SHADE FIXTURES.

STERBROOK'S STEEL PENS

SLANT OR VERTICAL

We make pens especially adapted for either style and all of first-class quality.

Ask your stationer

HE ESTERBROOK PEN CO.,

26 JOHN STREET, NEW YORK, WORKS, CAMDEN, N. J.